The Convergence of Science and Art: Conserving a Print of Hannah Snell

The complete analysis of a work of art is an interdisciplinary skill; to fully understand a work of art, the art historian must apply several methodologies. The historian needs to have an understanding of the artist's social context as well as the specific techniques and materials the artist has utilized. For the latter, conservation can aid in identifying the specific artist. Like art historical research, conservation is an interdisciplinary field that "requires the integration of scientific, contextual and aesthetic knowledge and manual skills to achieve an effective result, either preventive or interventive."[1] Conservation both brings to light new information about an artwork and enables the work to survive for future generations to study. Conservation analysis of an artwork provides the art historian with technical information about its construction, such as the support, the pigments, and the ink; this analysis may uncover previously hidden images and texts. The art historian can then combine these discoveries with information on the meaning and social context of a work to produce a more complete study that sheds light on the techniques, methods, and even motivations of the artist.

Because of our historic dependence on paper, artworks on this material are particularly important to preserve and study. Paper is a vehicle of mass communication, as a support for both text and art. Accordingly, works on paper constitute a large percentage of the holdings found in museum and private collections; such works encompass the media of drawing, print, painting, in addition to textual

[1] Mary M. Brooks and Sheila Fairbrass, "Literacy in Science: Using the Language in Conservation," in *The Interface between Science and Conservation*, ed. Susan Bradley (London: The British Museum, 1997), 31. This article runs from page 31 to 37.

documents. The conservator endeavors to stabilize a work to prevent recurrent problems. In the laboratory, treatment may include mending tears, flattening folds, and reducing the discoloration of works on paper.

For this thesis I plan to combine paper conservation treatment and art historical analysis to study the connection between the physical examination and subsequent treatment of a work and its art historical context. The curatorial and conservation staff at the Colonial Williamsburg Foundation chose several works that needed both conservation treatment and art historical research. Based on those available, I selected an engraving on paper by L. P. Boitard entitled *HANNAH SNELL the Female Soldier*. This print was in dire need of treatment owing to its state of deterioration, tears and holes, and drastic discoloration. Based on the treatment of the work and the art historical research, I have concluded that this is an original eighteenth-century print that was likely printed when the living Hannah Snell and her story were most popular in England.

My thesis is in two parts. The first consists of the conservation treatment, beginning with an overview of paper conservation practice and ending with detailed steps of the conservation treatment of this particular print. The second part deals with the art historical research of the print, with emphasis on the artist L. P. Boitard and the importance of Hannah Snell.

Part 1: Conservation Treatment

"History has been recorded for us primarily on three [materials] that might be considered to be the most ephemeral – papyrus, parchment, and paper."[2] However, paper has held particular importance to humanity for hundreds of years and its use has vastly exceeded the others, especially in modern times. Unfortunately, it easily degrades and conservation treatments are necessary to stabilize deteriorated works and prevent further damage.

Perhaps paper has been popular because it is simple to make; the papermaking process has remained relatively the same since ancient times. The Chinese invented the process of paper production and did so as early as the second century C.E.[3] They took silk and vegetable fibers, soaked them in water, and collected them on a porous cloth that acted as a sieve. The water drained and the fibers interlocked, drying into a sheet. The strongest, most durable papers tend to be hand-made of linen and cotton rags; the weakest are machine-made from ground wood that has been pulped and sized.[4] Wood pulp papers, however, were not made until the 1840s and the pulp was sometimes mixed with rag fibers to give it strength.[5] Based on its earlier date, the eighteenth-century print of Hannah Snell is likely a rag paper.

Although simple to make, paper also easily degrades because of its chemical make-up and is affected by its ambient environment. It is made of cellulose, "long-

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[2] H. P. Plenderleith and A. E. A. Werner, *The Conservation of Antiquities and Works of Art: Treatment, Repair, and Restoration*, 2nd ed. (London: Oxford University Press, 1971), 44.
[3] Dard Hunter, *Papermaking: The History and Technique of an Ancient Craft* (New York: Dover Publications, 1978), 50. Hunter also states that "the date usually given for the actual invention of paper is A.D. 105, but this date is chosen rather arbitrarily, since the first experiments in papermaking from disintegrated fibre probably extended over a long period before the process was actually brought to any degree of perfection and publicly announced," 48-50.
[4] Plenderleith, 54.
[5] Hunter, 376.

chain molecules in which the complex $C_6H_{10}O_5$ is repeated as many as 2,000 times."[6] Cellulose consists of covalently linked glucose molecules that each have three hydroxyl (OH) groups. These groups are very reactive, "and an almost infinite variety of compounds may be made by grafting on other groups."[7] As a result of its reactivity, over time cellulose is affected by the environment and pollutants, which cause the paper to age and deteriorate. Although we may not be aware of minor changes in environmental conditions, we can observe the effects of extreme temperatures, humidity, and light exposure by studying how paper reacts to its surroundings. Extreme climate conditions catalyze chemical reactions within the cellulose fibers, breaking them apart. Furthermore, natural chemicals and varying urban conditions that produce toxic vapors affect the climate, and therefore, the condition of paper products.[8] Luckily, these numerous conditions can be easily regulated in well-equipped buildings. Additionally, paper is affected by internal factors or "inherent vice," such as alum and bleaching residues from manufacturing and cleaning, metals within the fibers that convert sulfur dioxide from the air into sulfuric acid, and natural aging processes.[9]

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[6] George S. Brady, Henry R. Clauser, and John A. Vaccari, *Materials Handbook, An Encyclopedia for Managers, Technical Professionals, Purchasing and Production Managers, Technicians, and Supervisors*, 14th ed. (New York: McGraw-Hill, 1997), 181. The long chains are held together with hydrogen bonds, forming sheets, which are held together by Van der Waals forces. See *Archive Library & Museum Preservation* (Springfield, Virginia: Conservation Resources International, L.L.C., 2005), vi.

[7] Brady et al.

[8] Anne F. Clapp, *Curatorial Care of Works of Art on Paper* (New York: Lyons and Burford Publishers, 1987), 7.

[9] For more information on what causes paper to age, see R. Bruce Arnold, "New Tools to Measure Long-Term Paper Stability," in *Works of Art on Paper: Books, Documents and Photographs, Techniques and Conservation*, ed. Vincent Daniels, Alan Donnithorne, and Perry Smith (London: The International Institute for Conservation of Historic and Artistic Works, 2002), 1-4. This article explains three methods of accelerating the aging of paper: higher temperature, light flux, or nitrogen dioxide concentration. Also see Thea Burns, "'A Serious and Universal Evil': The Early Scientific Study of Paper Deterioration," ibid., 36-41. For more about the natural aging of paper and the production of acid, see Chandru J. Shahani and Gabrielle Harrison, "Spontaneous Formation of Acids in the Natural Aging of Paper," ibid., 189-192.

Cellulose degrades through the processes of oxidation and hydrolysis. When oxygen is absorbed within the paper, carbonyls and carboxylic acids form. These substances hydrolyze the cellulose chain, breaking covalent bonds and releasing hydrogen ions.[10] Therefore, one of the most important things to do in conserving paper is to test the pH, remove as much acid as possible, and add an alkaline solution to better stabilize the paper for the future.[11] The optimum pH for paper is 7 (neutral), and so the alkaline solution used cannot be more than approximately 8. If the alkaline solution is too strong, the paper is at risk of alkaline degradation.

Another of the most important conditions that should be regulated is the humidity of the environment surrounding the paper. Paper is hygroscopic; that is, it absorbs moisture from the air or atmosphere. Cellulose fibers expand and contract with the addition or subtraction of moisture. Excess moisture causes movement of the cellulose fibers, which results in planar distortion, buckling, and potential damage to the image or design layer. Conversely, a lack of moisture shrinks the cellulose fibers and causes the paper to become brittle. Fortunately, the amount of moisture in the air can be regulated. The Relative Humidity (RH) of a room/location is defined as the "amount of actual water vapor in a volume of air, expressed as a percentage of the total amount of vapor that the air could contain at the same temperature."[12] Garry Thomson maintains that the control of humidity is more important than that of temperature.[13] As temperature increases, RH decreases; this is because hot air has the potential to hold

[10] *Archive Library & Museum Preservation*, xii.
[11] The pH scale measures the number of hydrogen ions in a solution. An acid is defined as a substance that donates a proton, or a positively charged hydrogen ion. A base accepts a hydrogen ion and has a higher concentration of hydroxide ions.
[12] Clapp, 12.
[13] Garry Thomson, *The Museum Environment*, 2nd ed. (London: Butterworths, 1986), 66.

more moisture, so the *relative* humidity decreases. An RH above 65-70% promotes fungal growth, while an RH below 40% causes embrittlement.[14] Therefore, the RH should be kept within this range, without much fluctuation, to prevent the fibers from expanding and contracting. Relative humidity changes can be seen in the development of condensation on windows; these changes are less frequent if a building utilizes double-paned or tightly sealed storm windows.

Microorganisms are also a serious problem for works on paper. Excess moisture promotes fungal growth. The reddish-brown color of "foxing" can occur as the mold grows in spots on the paper. Another sign of mold is the appearance of "a fine white fluff;" if this appears it is best for the room to be dried.[15] Overall, when dealing with micro-organisms and RH, it is obviously best to detect such problems early on and to store the paper in an environment that has relatively stable conditions.[16]

Mold and mildew are not the only living things that effect paper. Insects are a large problem; they leave acidic droppings among the fibers and eat holes through the paper. The best way to get rid of insects is to keep all areas clean, quickly deal with any problems should they arise, and allow free circulation of the air. If they should appear, certain chemicals can be used that will kill the insects and not harm the paper.

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[14] Ibid., 87.

[15] For a specific example of mold growth and to learn more about the long-term concerns, see A. M. Baldwin, "An Introduction to Tiffany Studies," in *Art, Biology, and Conservation: Biodeterioration of Works of Art*, ed. Robert J. Koestler, et al. (New York: The Metropolitan Museum of Art, 2003), 82-93. The development of spots (or foxing) can also occur due to impurities. For information on the impurities in treatment water, also see V. Bullock, "Microbiological Impurity of Conservation Treatment Waters," ibid., 440-451. In this article, Bullock states that bacteria were present in the treatment waters tested, suggesting that "conservation-specific water standards be developed," 441.

[16] For more information on oscillating relative humidity, see John Bogaard and Paul M. Whitmore, "Explorations of the Role of Humidity Fluctuations in the Deterioration of Paper," in *Works of Art on Paper*, *passim.*, 11-15. In the experiment described, cotton filter papers were subjected to changing relative humidity (that alternated between 25% and 75 %). After 2200 cycles, the paper had suffered a decrease in tensile strength (to one-third the initial amount) and a decrease in cellulose polymerization (to one-half the initial amount).

As shown, many environmental conditions affect paper. To improve the condition and life of the paper, there are many steps in conservation treatment; and many literary sources emphasize the fact that amateurs can do more damage than good by not knowing how paper will respond to treatment or by utilizing methods that are out of date. It is important to have the proper education and professional training before attempting conservation treatment. The following describes the conservation treatment applied to the print of Hannah Snell. This treatment is a study of conservation methods as well as research of the professional literature; it includes a brief overview of the general processes conservators use when treating paper, a detailed account of the treatment of this Boitard print, and the rationale behind each step.

Before treatment, the print of Hannah Snell was terribly degraded. The print had been adhered to another sheet of paper and a thin piece of cardboard. Based on visual analysis and physical examination, both of these supports were quite acidic and caused considerable damage to the print, which was terribly discolored and brittle. The conservation treatment revealed a great deal about why different areas of the print had degraded at different rates. Photographs of the process are included at the end of this section.

The first step in conservation is to examine the work and evaluate the general condition. During the examination, the conservator completes a report that includes descriptive information as well as the physical and chemical condition of the work. If the paper has holes, tears, or folds, the locations are measured and recorded. Paper thickness, tone, brittleness, overall measurements, and pigment solubility tests are all

described and provided in the report. I began the examination and documentation of the print of Hannah Snell in August and the conservation treatment in September. After getting experience with particular treatment techniques and procedures, establishing hand skills, and completing photographic documentation, I could begin treatment of the print. Figures 1 and 2 show the print's initial state.

The first step in the treatment of a work on paper is usually dry cleaning. This process reduces soiling on the surface of the work. The conservator uses non-abrasive vinyl eraser crumbs and very gently rubs them over the surface of the paper, as long as it does not threaten the image area. Although the eraser crumbs are relatively non-abrasive to the paper, the conservator avoids the more sensitive areas of the design layer that could be altered by slight abrasion. The white crumbs slowly darken as they pick up the surface dirt; however, visual improvement in the work's appearance may only be slight. For the print of Hannah Snell, this step was not performed and would have proven detrimental, for the print had watercolor additions and delicate ink lines that would have been affected by the abrasion of the eraser crumbs.

For the print of Hannah Snell, the first step was mechanical removal of the cardboard mount, or tertiary support. The print itself is considered the primary support, for it holds or "supports" the inked image. Therefore, the paper between the print and cardboard is the secondary support and the cardboard is the tertiary support. Cardboard is composed of paper laminates, which form layers distinguishable by color and slight texture changes. While paring the cardboard with a scalpel, these layers provided indications of the proximity to the secondary support. The print was placed face down and I pared down the tertiary support, working from the reverse to the

obverse. I proceeded until I reached the front layer of the cardboard backing. Then I altered the technique, lightly scraping with a different edge to gently remove what remained attached to the secondary support. On reaching this middle sheet of paper, I found an inscription from a previous handler, perhaps a framer. It described the size and attachment of the cardboard mount, and I made note of the inscription in the treatment log. Removal of the tertiary support took approximately six hours.

I then began to remove the secondary support. This procedure took considerably longer. The print was extremely brittle so that I had to be very careful not to damage it when removing the backing paper. In order to make the process safer for the print and more efficient, I used transmitted light provided by the light table, which allowed me to see changes in thickness of the secondary support and gave me a better sense of where the print was in relation to the paper layer being removed. I also used moisture to soften and separate the paper layers. Figure 3 shows the print during the process of the secondary support removal. Figures 4 and 5 illustrate the process. Some areas of the secondary support were more strongly adhered to the print. Therefore, I also began the process of removing some of the adhesive as well as the secondary support. I determined that the adhesive used to attach the papers was paste and so used cotton swabs dampened with saliva to break down the adhesive. The various enzymes in saliva break apart components, such as complex carbohydrates, in paste. A great deal of the adhesive came off in this way and I was able to remove much more of the secondary support.

Additionally, during the removal of this support, I had to lighten the pressure I was applying to the scraping tool, a metal micro-spatula. By wetting the paper with

water and saliva, I was also wetting the print. If I pressed a little too hard, I also removed a tiny layer of the back of the primary support. It is best to avoid such abrasion. The conservator's goal is to leave the original work unaltered as much as possible. The conservator constantly weighs the risks and benefits of each treatment procedure. If the risks outweigh the benefits, an alternate approach is chosen or treatment is not done.[17] For this print, it was important to remove the paste so that during the washing process the water would penetrate the paper evenly and thoroughly.

After removing as much of the secondary support and adhesive as possible, I progressed to using enzymes to remove the remaining adhesive. Continued mechanical action was too risky because of the print's degraded state and the resulting abrasion. Therefore, the use of enzymes was considered. Enzymes break down the components in the adhesive, making the paste more water soluble. Two enzymes commonly used are alpha-amylase and protease. Amylase is used to digest the starch. Protease digests proteins, including amylase, and so is used secondly to remove protein-based adhesives and the present amylase.[18]

Prior to utilizing an enzyme, the adhesive must be identified. Based on the color of the adhesive on the reverse side of the Boitard print, the adhesive was likely either gum-based or a glue, which contains protein. To test for the presence of a proteinaceous adhesive, I used the biuret test; the procedure is as follows: First, I took an adhesive sample from the cotton swab I had been using to gently lift the adhesive. I

[17] In this step in the conservation process, we had to access how much potential damage we could do to the print. For more on risk analysis, see Jonathan Ashley-Smith, "Risk Analysis," in *The Interface between Science and Conservation*, *passim.*, 123-132. This article provides diagrams of the method behind risk analysis.

[18] For more information on starches, proteins, and enzymes, see B. L. Browning, *Analysis of Paper* (New York: Marcel Dekker Inc., 1969) and Harold M. Erickson, "Usage Recommendations for α-Amylases: Maximizing Enzyme Activity while Minimizing Enzyme-Artifact Binding Residues," in *The Book and Paper Group Annual*, vol. 11 (Washington D.C.: The Book and Paper Group, 1992), 24-33.

used a swab with water and not saliva, for saliva contains protein (although a very small amount) and may affect the test. I added a drop of 2% w/v copper sulfate ($CuSO_4$ – 1 gram in 50 mL of deionized, abbreviated DI, water) followed by a drop of 5% w/v sodium hydroxide (NaOH – 2.5 grams in 50 mL of DI water) and allowed the swab to sit for a few minutes. A resulting violet color indicates the presence of protein; however, the test yielded only a dark blue color. I then tested a direct sample of the adhesive by scraping away some from the back of the print and placing the pieces on a glass slide. Although the color was more difficult to see, the result was also blue. According to the test result, the adhesive was not proteinaceous, and therefore, not a glue but a gum-based adhesive.

Because I lacked a gum-specific enzyme, I used a broad spectrum enzyme. I started with an "Original Papaya Enzyme" pill, a digestive supplement that contains a variety of enzymes. I put the tablet in 50 mL of deionized water and heated it, making sure to keep the temperature under 100 degrees Fahrenheit in order to not denature the enzyme. I broke up the pill and brought it into solution. I then added methyl cellulose (5% w/v, or 5 grams of A4C powder in 100 mL DI water) to make about a 50/50 mixture. Methyl cellulose acts as a poultice, holding moisture in an area. The thickness of the resulting solution greatly helped in the removal of the adhesive. In order to use it on the print, I first wet the print area with a cotton swab and then added a small amount of the solution. I let it sit for about 5 to 10 minutes and was then able to gently scrape away much of the remaining adhesive. Once I was finished using the enzyme for the day, I also went back over the print with a 50/50 ethanol-water solution to deactivate any remaining enzyme. Organic solvents, such as ethanol, denature

enzymes, and the water within the solution removed excess methyl cellulose.[19] I later compared the enzyme mixture to a thinner solution (1% w/v) of methyl cellulose, which mainly wet the paper and was not as effective in removing areas of adhesive. Once I discovered that the mixture's effectiveness was due to its thickness, I decided to see if the 5% w/v methyl cellulose was effective without the addition of the enzyme pill. I found that it was just as effective, and therefore, continued work without the papaya enzyme pill. The removal of the secondary support and adhesive to this point took a total of 40 hours.

The next step in treatment was the washing process (shown in Figures 6-8). To begin I cut a few dozen blotters slightly larger than the print (about 1.5 to 2 inches wider on each side). I then covered the suction table, except an area for the print and blotters, with plastic film that acts as a mask and localizes suction. The vacuum suction table is composed of perforated aluminum panel skins around a Hexcel® aluminum honeycomb core that is attached to a suction pump. The core's honeycomb structure gives it strength while permitting it to be light weight. The print was positioned on 4 or 5 blotters and placed on the table. I used a pressurized sprayer to evenly wet the print and then turned on the suction. The water picks up impurities in the paper that cause the discoloration and the action of the suction table allows the blotters to absorb the soluble impurities.[20] Suction and capillary action remove a great deal of the discoloration caused by degradation, much of which can be seen in the blotters. A photograph of the top blotter from the first washing is provided (Figure 9).

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[19] Enzymes can also be denatured by the addition of heat, strong acids or bases, and inorganic salts.

[20] When using water or water-based solutions, the impurities that transfer to the blotter are water-soluble. According to the studies done in Vincent Daniels and Joanna Kosek, "The Rate of Washing of Paper," in *Works of Art of Paper*, *passim.*, 47-51, as paper ages, it is more difficult to treat with washing. However, with an increase in temperature both the rate and the extent of washing increase.

The washing process is repeated until the blotters no longer show discoloration. I stopped bathing the print when washing no longer reduced discoloration and the blotters showed only a faint yellowish tint.[21]

The washing process does more than remove discoloration; it also gives the paper greater elasticity. Studies have been conducted to determine how aqueous treatments affect the strength of the paper.[22] Because of its polar nature, water penetrates cellulose fibers and causes them to swell. Moisture increases the elasticity, plasticity, lateral swelling, and tensile strength of the paper. Additionally, water can transport chemicals or ions among the fibers and so can bring about significant mechanical or chemical change.[23] In this way, bathing the paper decreases discoloration and removes impurities. Paper fibers are arranged in layers, owing to the filtration process in its production, and are held together by hydrogen bonds. The water molecules compete with the hydroxyl groups of the fibers to form these hydrogen bonds. One experiment studied the affect of this competition and whether the hydrogen bonds between the fibers are reformed after drying. Greater strength would result from a greater number of reformed hydrogen bonds. The experiment supports the conclusion that the papers, which in this experiment are machine-made, do not increase in tensile strength after washing, but do increase in extensibility and elasticity probably due to "relaxation of fibre strain and reduction in the proportion of

[21] The difficulties during washing could be due to the paper's age. See again Daniels and Kosek.
[22] Anthony W. Smith, "Effects of Aqueous Treatments on the Mechanical Properties of Paper," in *The Interface Between Science and Conservation*, *passim.*, 59-62. This article provides information on the experiments performed and includes tables comparing washed papers and a control (untreated papers).
[23] Ibid., 59.

fibre bonding area within the paper sheets."[24] Therefore, it seems that not all the original hydrogen bonds are reformed, giving the paper a more elastic quality.

Despite this print's degraded state, the condition greatly improved with the washing. The image became more defined as a result of greater contrast between the paper and ink lines. This is especially apparent in the ground area at the bottom of the print. This ground area is slightly brown compared to the rest of the print and has suffered from more discoloration. This is probably a result of a copper resinate pigment wash, which would have originally had a green tint. Hints of this green tint could be seen on the first blotter during the bathing procedure. The verdigris wash had turned brown over time due to acid from the aging paper; however, the copper pigment causes extreme cellulose degradation, which explains the area's greater deterioration. In fact, this area was the hardest to conserve. When removing the secondary support and adhesive, some areas were so brittle that they fractured and had to be reattached during the mending process. Even though this verdigris wash was part of the original piece, due to its destructive nature, I continued to wash the print at risk of losing some of the pigment.[25]

After washing the print with deionized water, I washed it with an ammonium hydroxide solution (ammonium hydroxide in DI water brought to a pH of 8) and a calcium hydroxide solution (calcium hydroxide in DI water also brought to a pH of 8). Like the water, ammonium hydroxide removes discoloration; it sometimes is more effective than water alone because the elevated pH expands the cellulose fibers exposing more surface area. The calcium hydroxide protects the paper from later

[24] Ibid., 62.
[25] See Ashley-Smith, *passim*.

damage. It is slightly alkaline and so will buffer future acidity. Once all washes were complete, I put the print under felts and glass to allow it to dry flat.

After allowing the paper to dry, I could begin to fill losses in the primary support with paper pulp. This process is essentially the process of making paper. The first step is to use paper pulp of various colors and combine them to match the print color. I soaked the pulps in deionized water, blended the colored pulps together, strained the mixture, and allowed it to dry by using a hair dryer and a hot iron. The dried pulp sample was compared to the color of the primary support. This process is much like mixing paint on a palette. There are various colored pulps, including yellow, blue, green, red, black, and various shades of brown. I determined that the print, although brown due to discoloration, has a great deal of yellow and a slight amount of purple. Unfortunately, after mixing numerous trial pulp fillings, I discovered that no mixture was dark enough. Each of the colors turns out lighter than the original color of the pulp pieces, so that even by using the darkest brown and black the pulp mixture was still lighter than the print. Therefore, I mixed pulp of a lighter value but similar hue and planned to tone the pulp fills in a successive step. Figures 10-14 show the process of blending pulp.

After choosing a hue for the paper pulp, I blended it again in water and made a thin slurry. I put the print on polyester webbing, which is a material that will not stick to wet paper. I then wet the print with a pressurized sprayer to expand the fibers and applied the pulp slurry to the loss areas. With a dropper and tweezers, I distributed the pulp evenly within the loss. I used blotter paper to soak up excess water. Lastly I removed excess pulp around the edges of the losses, leaving only a millimeter or two

of overlap (Figures 15 and 16). Removing the excess water and allowing the overlap permits the fibers of the pulp and the primary support to interlock and add strength to the fill. The fills give the print physical stability and lessen visual damage, allowing the viewer's eye to read the work as a whole. Figures 17 and 18 show the obverse and reverse of the print after the addition of the pulp fills.

After filling in the holes and small tears with pulp, I began to mend the larger tears and losses with Japanese paper and wheat starch paste (Figures 19-21). Conservators use Japanese paper because it is light weight and so doesn't add much thickness to the loss areas. It is also strong because of its long fibers. Wheat starch paste is used because it is stable, reversible in water, and does not discolor as it ages.[26] I first washed the print fragments with calcium hydroxide and positioned them on the print. I then used tiny strips of Japanese paper and wheat starch paste to adhere the losses from the back side of the print. For the larger losses that could not be filled with paper pulp I had to tone a Western paper, similar in texture and thickness, and attach it from the back. Just as I mixed different colored pulps, I mixed different acrylic paints to make a color close to that of the print (Figures 22 and 23). Acrylic paint is used for this process so that when the paper is attached to the print by the wet paste, it does not bleed from the paper. Fortunately, I had greater luck than with the paper pulps. I painted across the Western paper in thin layers, working the color up to that of the print and avoiding paint lines. Once I created a satisfactory color, I used the light table to trace the loss sections, accounting for a little overlap. I scored around these sections, chamfering the edges to allow the slight overlap with the primary support (Figure 24).

[26] Conservators frequently use Japanese techniques because the Japanese have a long, successful history of caring for artifacts and paper based materials.

These sections were adhered with the wheat starch paste. Finally, with the largest losses filled, I used dry pulp, made by drops of wet pulp dried on polyester webbing, and paste to strengthen weaker, thinned areas and reinforce some of the smaller losses.

Once all the mends were completed and no other alterations needed to be done from the back of the print, the primary support could be lined. Lining provides an auxiliary support to increase structural stability. The print was lined with Kaji paper, a Japanese paper made from a bast fiber. The lining process requires two polyester web sheets, two sheets of Mylar®, dilute wheat starch paste, and various Japanese brushes. The print was placed on a sheet of polyester webbing and then on a sheet of Mylar®. The Kaji sheet was positioned on the second sheet of Mylar®, which acted as a carrier after the paste was applied. First, the Noribake, a brush used for spreading paste, was used to apply paste over the Kaji paper and remove wrinkles (Figure 25). The print was then sprayed with water from the pressurized sprayer to relax and expand the fibers. After the excess paste was removed from the Kaji paper, it was lifted, supported by the Mylar®, and placed on the verso or reverse of the print. The Nazebake was brushed over the Mylar®-covered lining paper to smooth the primary support and Kaji paper together, and a squeegee removed any air between them. The Mylar® was rolled back at an acute angel, making sure not to disturb the papers. Then the Uchibake, a brush used to pound together sheets of paper to ensure good adhesion, was tapped on the Kaji paper and primary support (Figure 26). Finally, the Mylar® on the obverse side was removed and the print was placed between the two polyester webs. From here, I placed the print and webs between blotters and underneath weights to flatten and dry over approximately two weeks. In order to dry thoroughly, the print was

regularly moved within the blotter stack. Figure 27 shows the obverse of the print after the lining and Figures 28-30 show the print being placed between blotters and under weights.

The final treatment step for this print was inpainting, or color compensation. Figures 31 and 32 illustrate the inpainting process. First, I brushed methyl cellulose over the areas with pulp and paper fills. This resizes those areas and prevents the paper from absorbing too much of the pigment. I then used a palette of watercolors to match different areas of the print. Starting at the edges of the fill areas, I dabbed watercolor to match the adjacent print area; I worked from the outside edge inward. Different areas of the print were discolored in varying degrees, so each fill area was inpainted in a slightly different color in order to match the surrounding area. After the base color had been applied to the fills, I used a thin brush to paint lines to match and connect those of the engraving. By adding these, the viewer's eye is less likely to focus on the damaged areas.

After the inpainting, the print was housed in acid-free window and back mats. The treatment took a total of 80 hours. Figures 33 and 34 show the print, obverse and reverse, after completion of the treatment.

Based on the condition of the piece and the conservation treatment, this is an original eighteenth-century print. In the next part of the thesis, I shall combine this information with the art historical research of the artist L.-P. Boitard, examine the selection of Hannah Snell as his subject, as well as explain the character and reputation of Hannah Snell. The art historical research supports the assertion that this is an original and significant artwork.

Figure 1: Before Treatment – Obverse

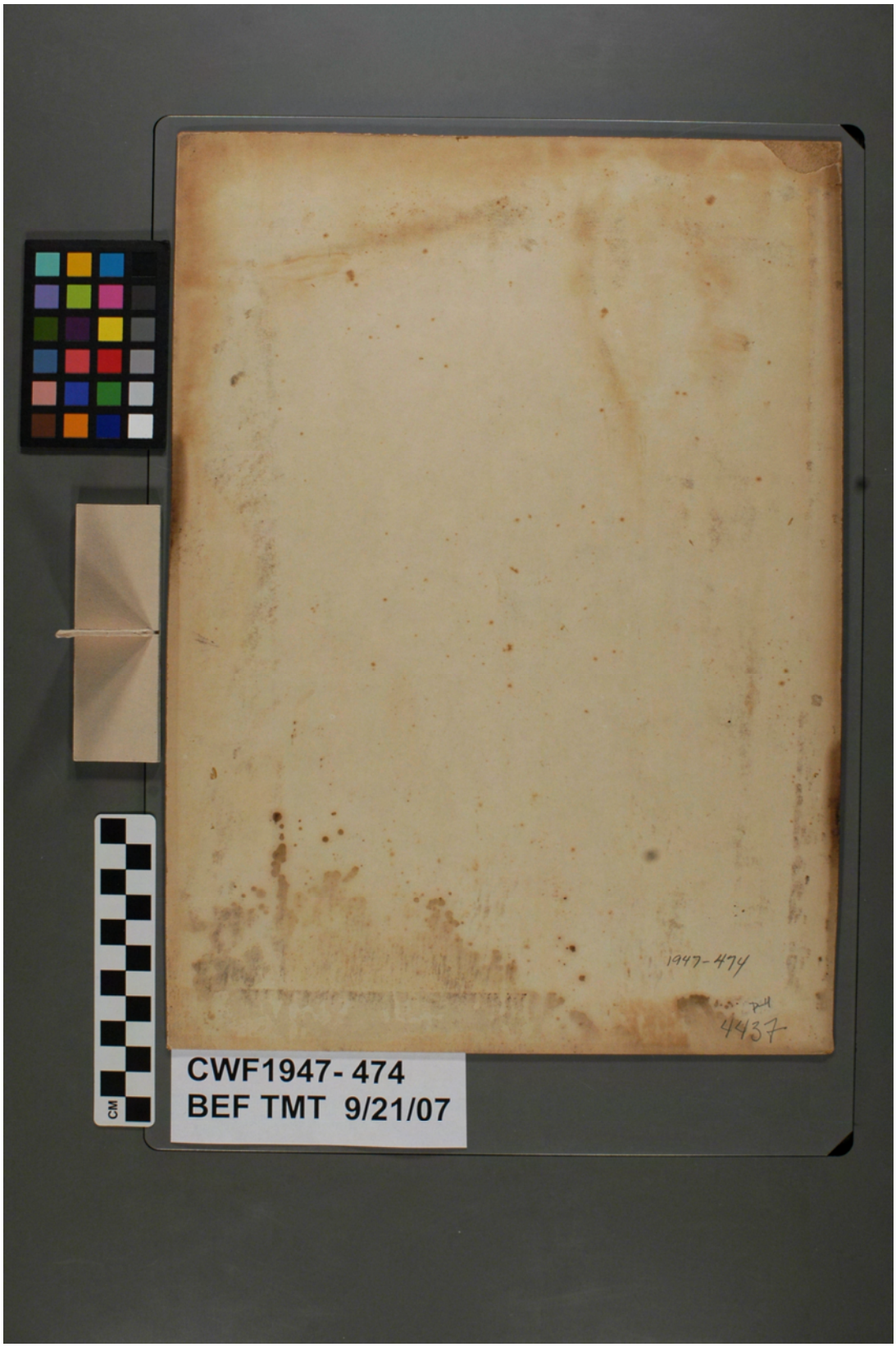

Figure 2: Before Treatment – Reverse

Figure 3: During Treatment – Partial Removal of Secondary Support: The transmitted light from the light table indicates areas of weakness and loss.

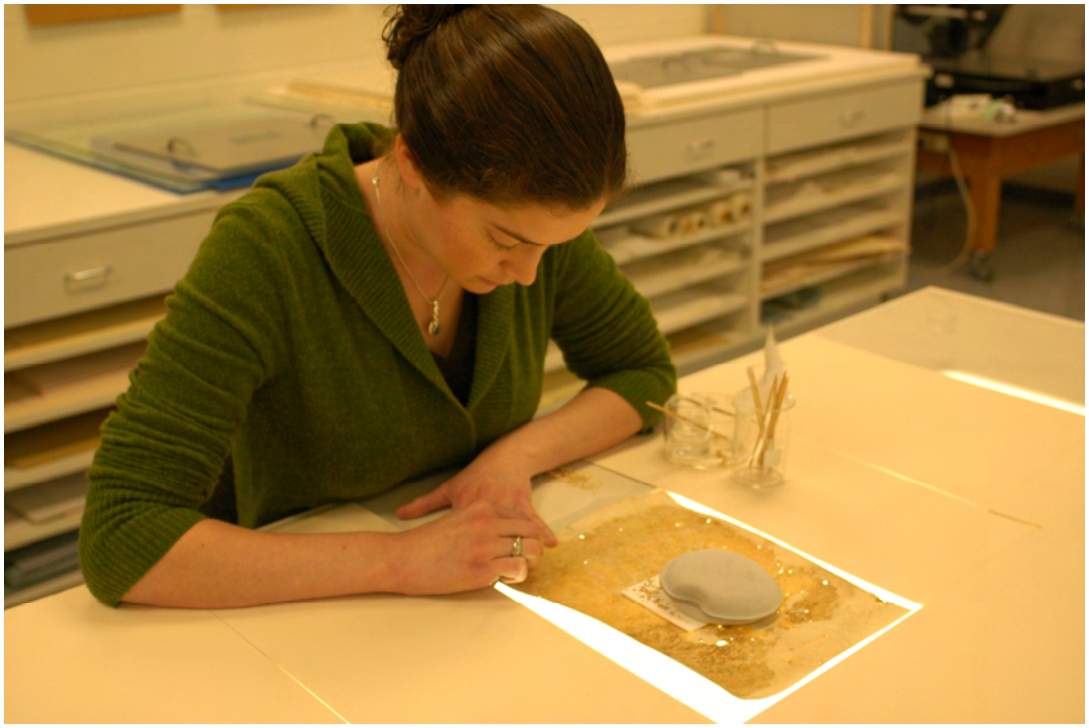

Figure 4: These photographs show the process of removing the secondary support.

Figure 5

Figure 6: These three photographs illustrate the washing process. The print is placed on blotters and then on the suction table, which is best shown in Figure 7. The print is then sprayed with an even coat of deionized water to remove impurities and discoloration.

Figure 7

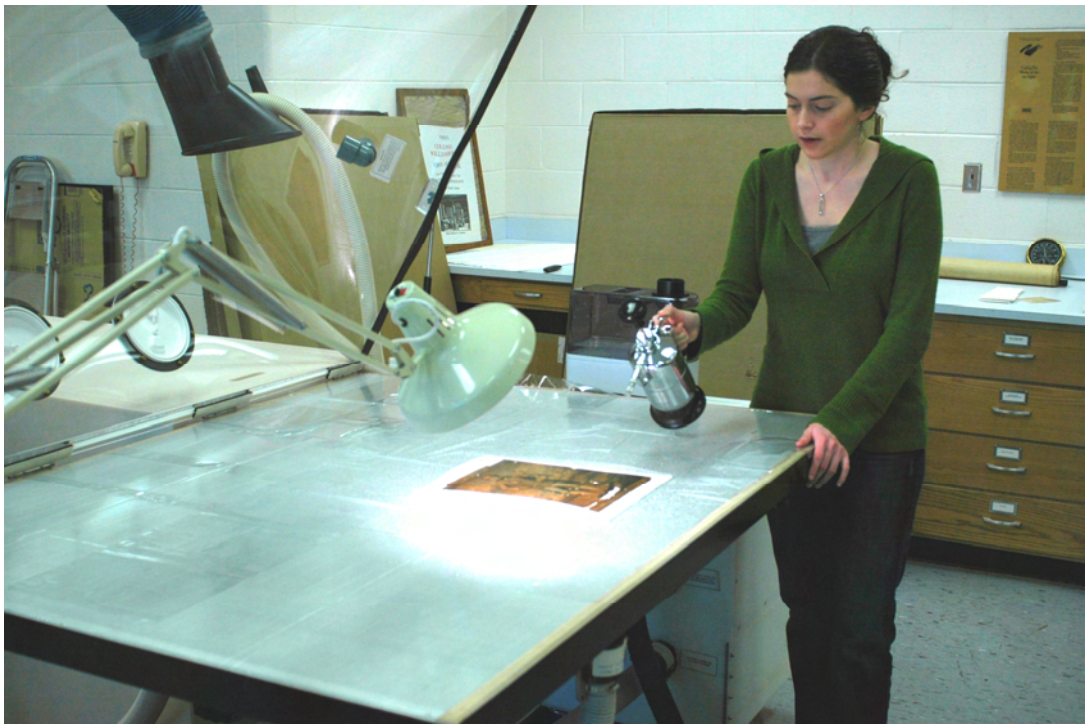

Figure 8

Figure 9: The first blotter after the first washing shows significant discoloration.

Figure 10: Blending paper pulps

Figure 11: Straining the pulp mixture

Figure 12: The pulp mixture on polyester webbing

Figure 13: Drying the paper pulp into a sheet

Figure 14: Comparing the various resulting paper colors

Figure 15: Preparation for applying the paper pulp

Figure 16: Absorbing excess water after applying the paper pulp

Figure 17: During Treatment – Obverse After Removal of Tertiary and Secondary Supports, Washing, and Paper Pulp Additions

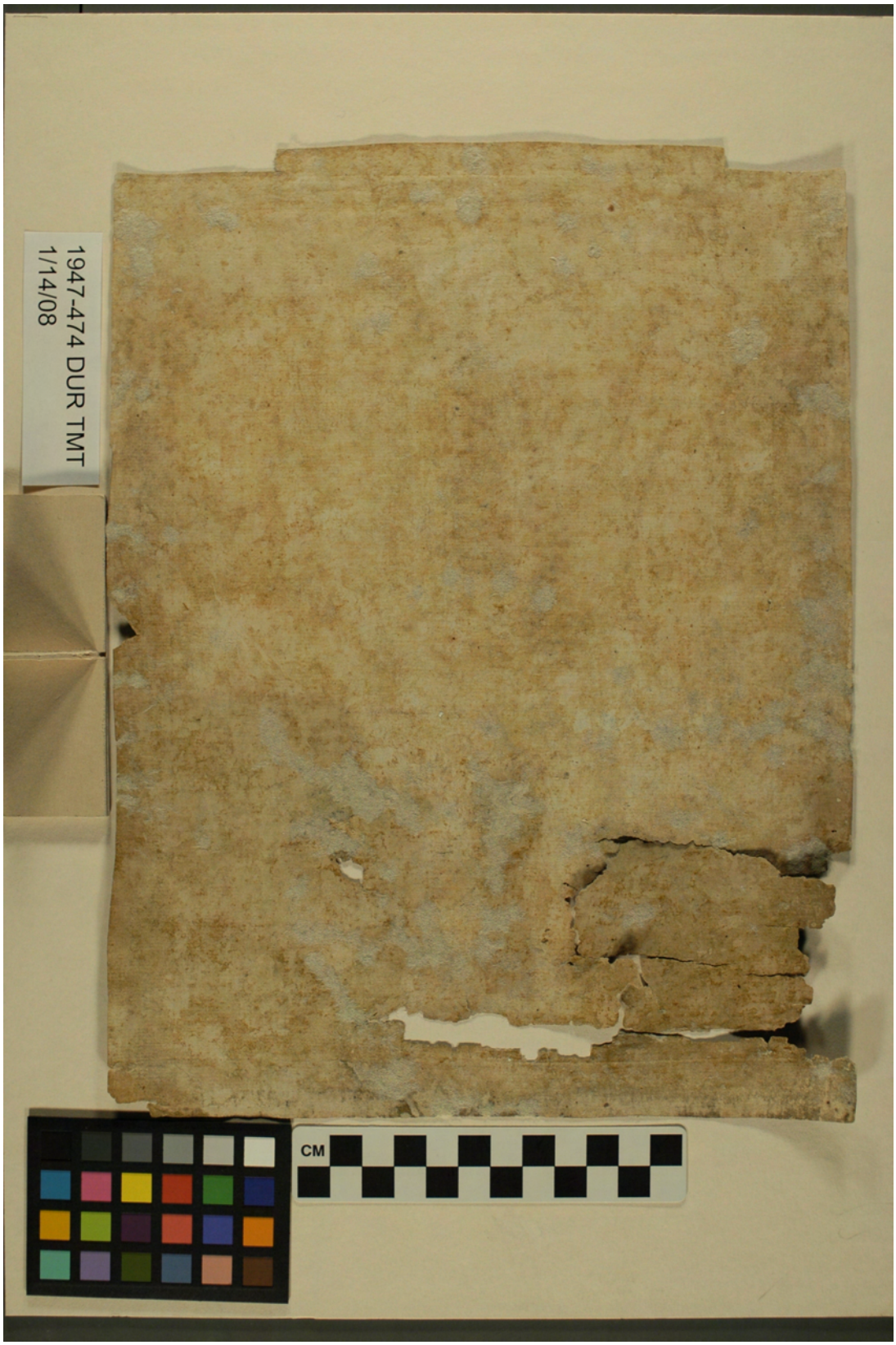

Figure 18: During Treatment – Reverse After Removal of Tertiary and Secondary Supports, Washing, and Paper Pulp Additions

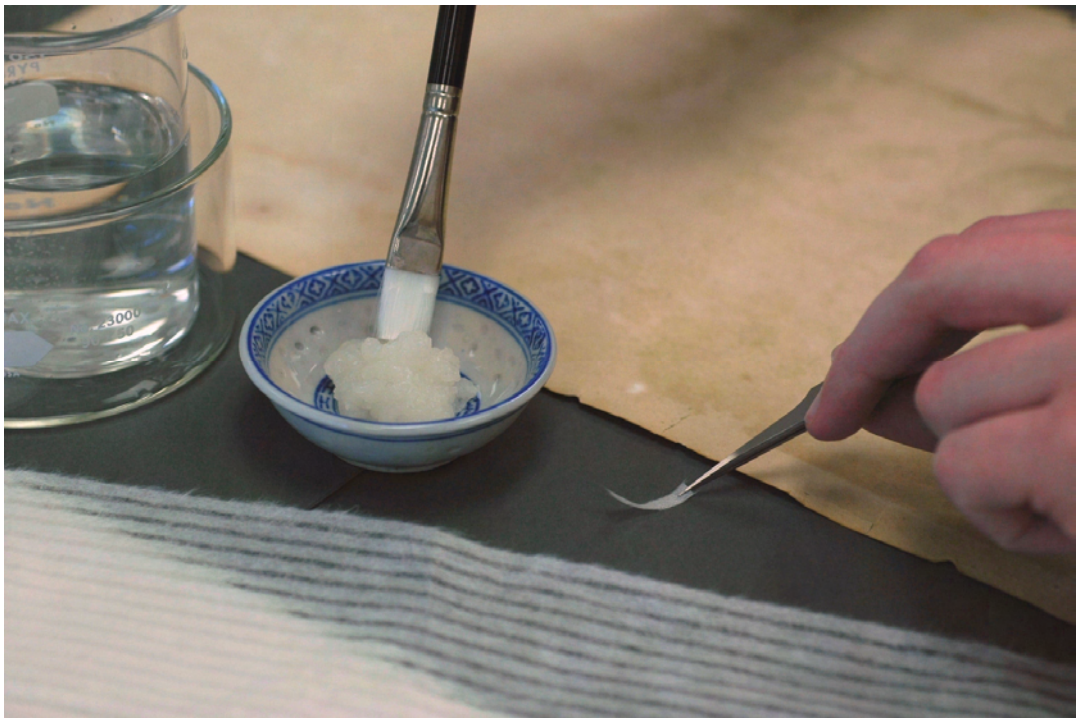

Figure 19: These three photographs show the process of mending tears.

Figure 20

Figure 21

Figure 22: Applying acrylic paints to tone the paper

Figure 23

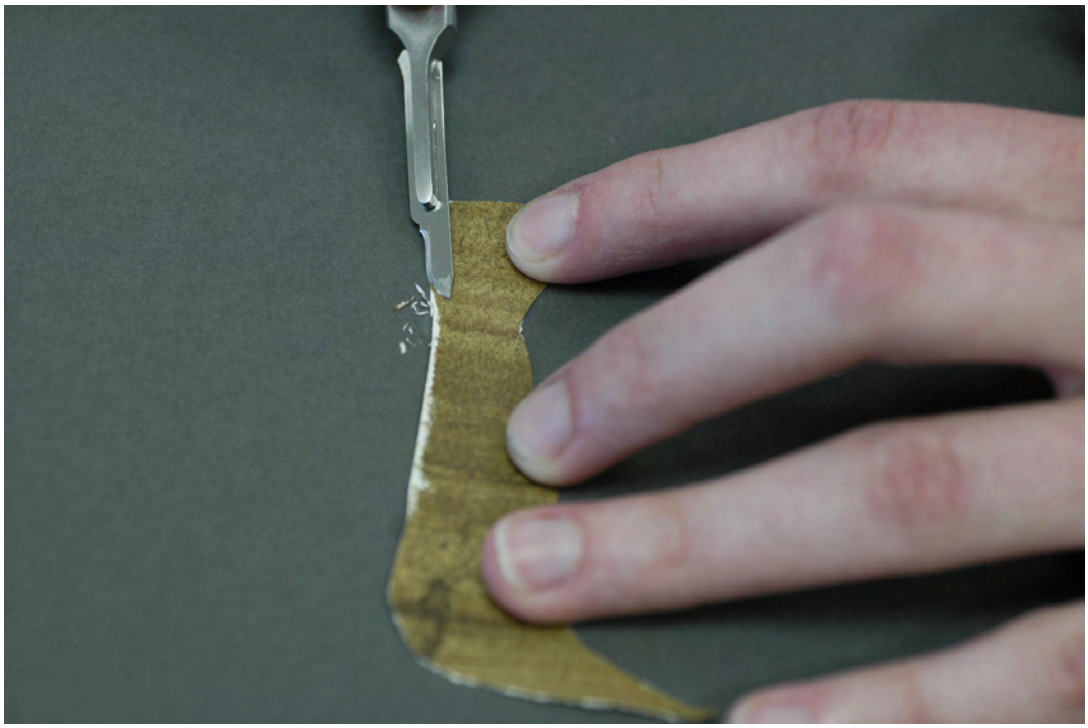

Figure 24: Paring the edges of the inserts

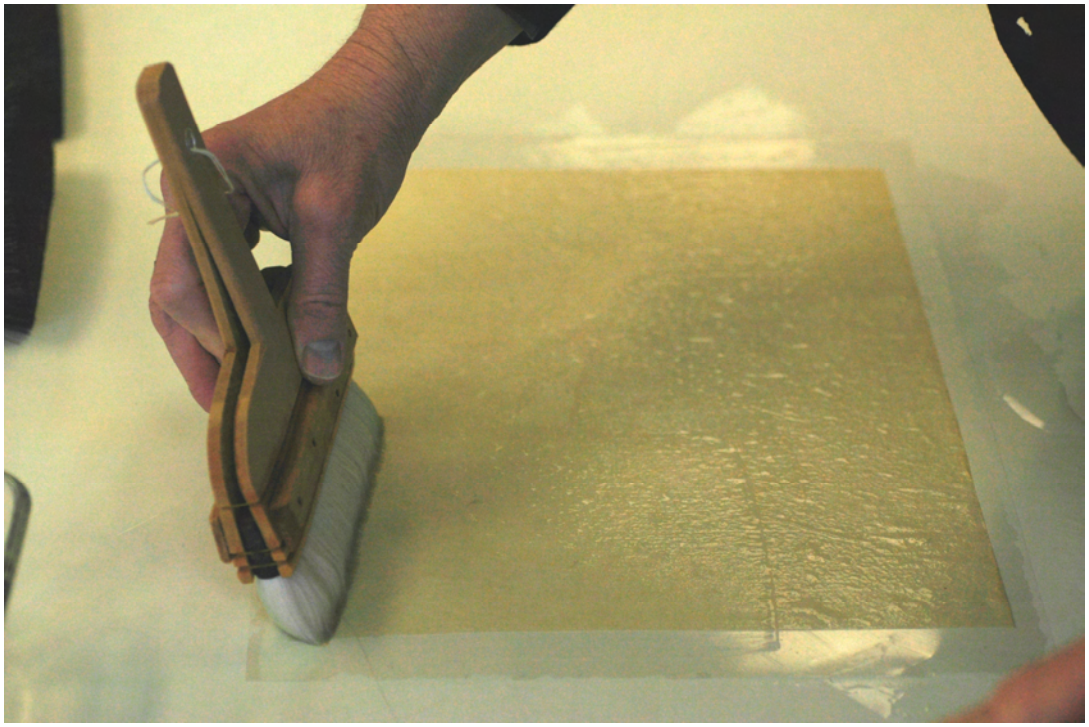

Figure 25: Applying the paste with the Noribake Brush

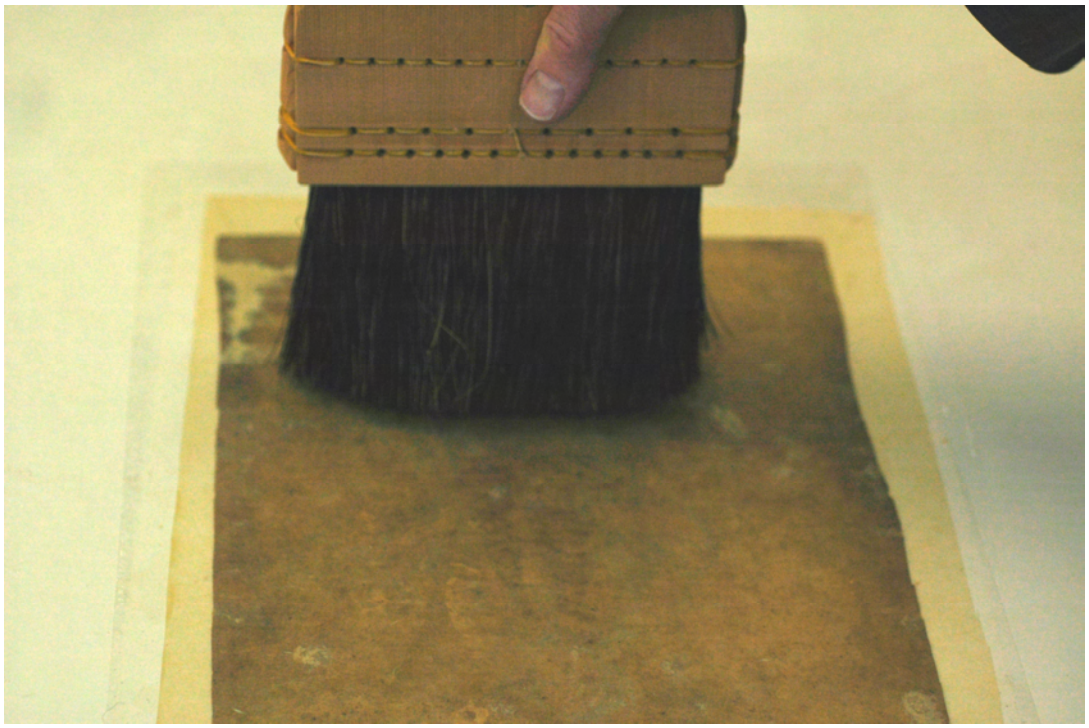

Figure 26: Adhering the print with the Uchibake Brush

Figure 27: During Treatment – Obverse After Inserts and Lining

Figure 28: Placing the print on blotters and under weights

Figure 29

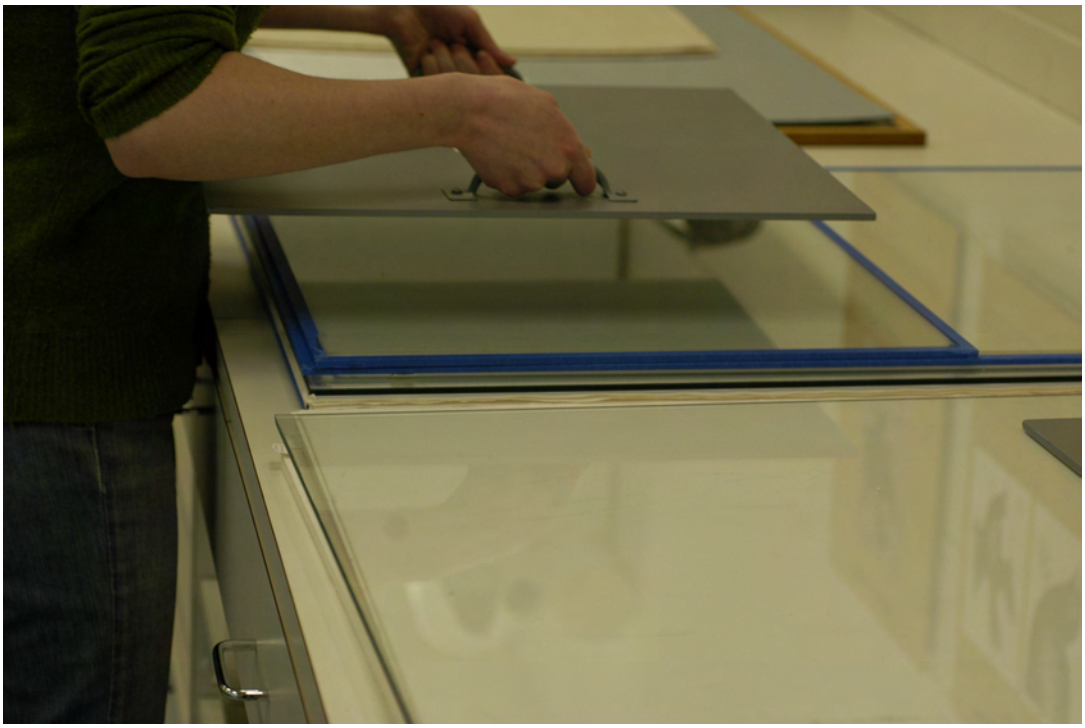

Figure 30

Figure 31: Inpainting using watercolors

Figure 32: Inpainting – Drawing lines over the inpainted areas so they match the rest of the print

Figure 33: After Treatment – Obverse

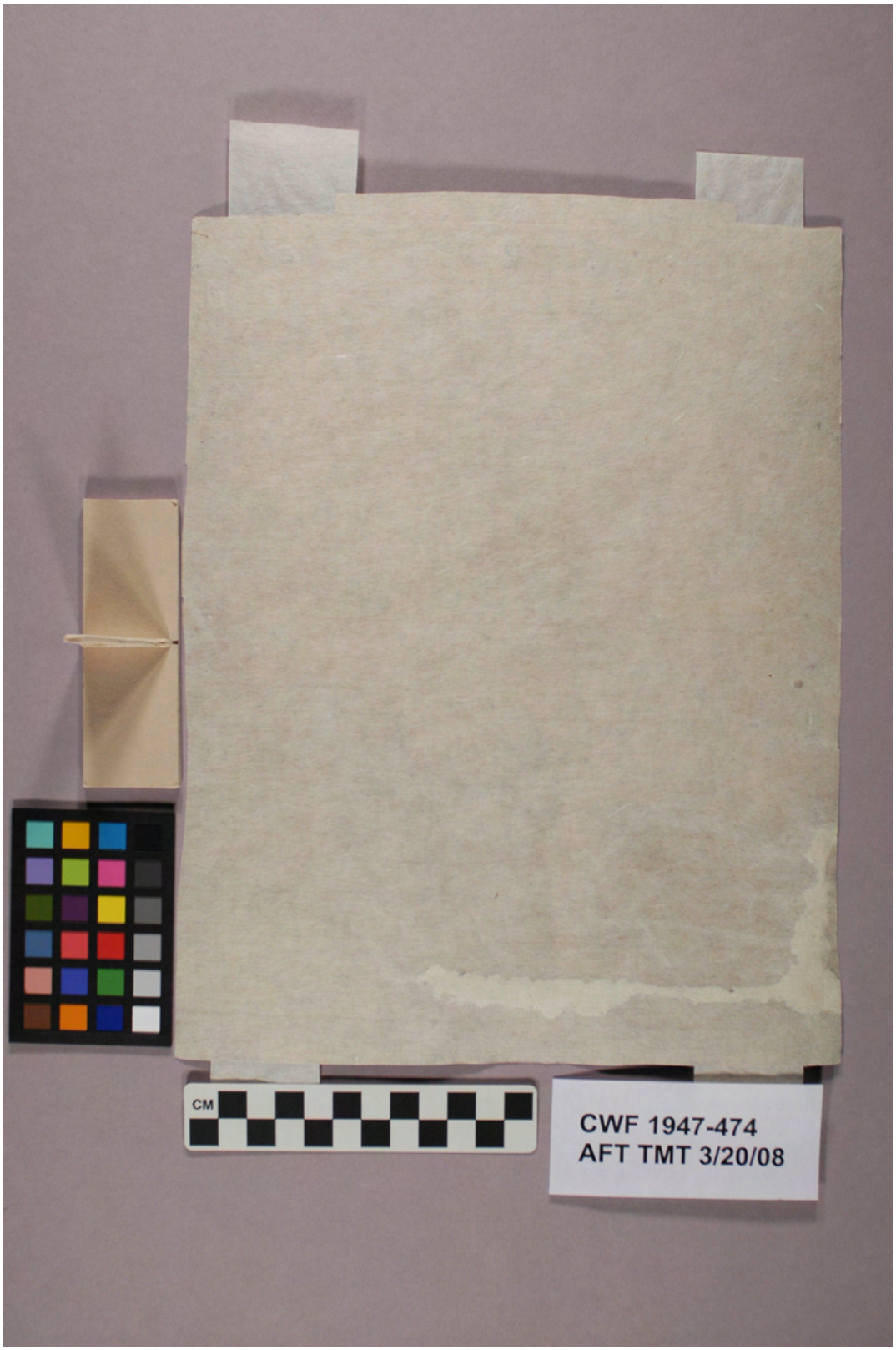

Figure 34: After Treatment - Reverse

Part 2: Art Historical Research

The second half of this study is the art historical research on the artist Louis-Philippe Boitard, his choice of Hannah Snell as a subject, who he claimed that he drew from life, the importance of Hannah Snell as a feminist heroine, and last, the significance of the engraving in the Colonial Williamsburg Foundation.

Boitard was an engraver of the unusual and strange, and his focus on Hannah Snell was no exception. She was an unusual character who led an adventurous life in the military, published her account, and became a popular figure in eighteenth-century England. However, despite her adventurous life, I argue that the embellishments or fabrications within her account as a female soldier made her famous. The most important of her claims was her assertion that she hid her true gender the entire time while enlisted in military service.

Although Louis-Philippe Boitard was a prolific engraver in the eighteenth century, he is not well-known. His father, François Boitard (1660-1717), was a successful artist, specializing in drawings. Boitard followed in his father's footsteps and began his artistic career by working in an enameling factory and drawing scenes on tobacco boxes. Madeleine Blondel states that one can see the influence of Hogarth in some of his works.[27] He then began engraving and was an active engraver between 1734 and 1760.

[27] Madeleine Blondel, "Louis-Philippe Boitard, Illustrateur du Fantastique," *Gazette des Beaux-Arts*, series 6, vol. 110 (1987): 165-167.

Much of what we know about Boitard stems from his works.[28] He frequently drew images of sailors and passengers traveling across the English Channel. However, Boitard truly excelled in engraving images for imaginary adventure stories, especially those including unusual creatures and beings. He seemed to take pleasure in representing these imaginary images and certainly showed originality.[29] It is therefore not a surprise that he would eventually design an image of Hannah Snell, an unusual young woman who dressed as a man in order to hide her "fair sex," become a sailor, and find her unfaithful husband.

Image from *The Scribleriad*, 1751 (Blondel, 166)

An example of Boitard's fascination with the unusual and bizarre is his engraving for *The Scribleriad*, a heroic poem by Richard Owen Cambridge.[30] In one image he depicts an aerial duel between two men, one German and one English. The two figures are flying with the help of illogical aerial mechanisms and fighting above a crowd. Boitard seems to have taken an interest in flight; he depicts a range of different apparatuses to aid his characters.[31] However, the fact that these men are flying is not the only thing that makes this particular image

[28] There may be some confusion over Louis-Philippe Boitard's name. I have found information on a Louis Pierre Boitard, but he is likely the same person; their life stories seem to correspond. They both moved to England, married an Englishwoman, were students of La Farge, and were active as engravers at the same time. For information on Louis "Pierre" Boitard, see Michael Bryan, *Bryan's Dictionary of Painters and Engravers* (London: G. Bell and Sons, Ltd., 1930). Also see Madeleine Blondel, who states that there has been confusion over the names: "La première oeuvre où ses prénoms sont indiqués en toutes lettres, (dissipant ainsi l'erreur de ceux qui l'appelleraient Louis Pierre et non Louis-Philippe) est une gravure de 1738," 165.

[29] Blondel, 167. She states that he was original "et que Boitard paraît avoir eu plaisir à représenter."

[30] For information on heroic poems, see Ulrich Broich, *Mock-Heroic Poetry, 1680-1750* (Tübingen, M. Niemeyer, 1971). Also see Ulrich Broich, *The Eighteenth-Century Mock-Heroic Poem* (Cambridge, Cambridge University Press, 1990), 169-172.

[31] For other images dealing with flying mechanisms, see Figures 5 and 6.

unusual. The animals in the poem and image are also curious. Boitard includes a six-legged cow, an oversized toad, and a giant prehistoric shell. They seem to be from the imagination of the poet and the designer; however, they also show an eighteenth-century interest in archaeology and science. The giant fossil is something still collected and studied today and eighteenth-century natural history books mention the existence of the toad, called the toad of Surinam.[32] Despite the eighteenth-century interest in science, the seemingly random arrangement of such subjects is unusual and may be evidence of Boitard's interpretation. Another image from *The Scribleriad* (Figure 1 in the appendix following this section) shows a unicorn, panther, and mermaid in the middle of a river or stream. While Boitard followed the text of the heroic poem, the inclusion of the unicorn indicates his own touches.[33] Other unusual images include those from *The Travels and Adventures of William Bingfield* (Figure 2), in which he depicts a Dog-Bird, and those for *A Narrative of the Life and Astonishing Adventures of John Daniel*, in which he illustrates the creature resulting from a cross between a human and a fish.[34]

Image from *A Narrative of the Life…of John Daniel*, 1751
(Blondel, 169)

[32] Blondel, 167.
[33] Ibid.
[34] For these stories, see the online versions: *The Travels and Adventures of William Bingfield, Esq: Containing As Surprising a Fluctuation of Circumstances, both by Sea and Land, as ever befel one Man. with An accurate Account of the Shape, Nature, and Properties of the most furious, and amazing Animal, the Dog-Bird*, vol. 2 (London, Printed for E. Withers, etc., 1753). This can also be found at this webpage:
http://books.google.com/books?hl=en&id=8m4lAAAAMAAJ&dq=the+travels+and+adventures+of+william+bingfield&printsec=frontcover&source=web&ots=1q9Ts_FEgS&sig=DLVU0Zy2KOIr-Gk3vFyU--V1qMg#PPP1,M1
Also see Ralph Morris and John Daniel, *A Narrative of the Life and Astonishing Adventures of John Daniel* (London, Printed for M. Cooper, 1751). This can also be found at this webpage:
http://books.google.com/books?id=4SlZzdvsTsoC&pg=PA1&lpg=PA1&dq=a+narrative+of+the+life+of

Even though Boitard seemed to gravitate toward the bizarre and unusual, he also depicted more normal human figures. Those from *The Life and Adventures of Peter Wilkins*, by Robert Paltock (Figures 3 and 4) and *British Resentment*, or *The French fairly coopt at Louisbourg* (Figure 7) portray more conventional human forms.[35] In two other known works, the moral images of *The Harlot's Nurse,* or *Modern Procuress* and *The Prodigal's Nurse,* or *Modern Heir* (Figures 8 and 9 respectively), he also portrays more conventional figures, but here too he impels the viewer to accept exaggerated differences. In both of these prints, Boitard presents us with an interesting juxtaposition of old and young. The young harlot and the young prodigal are presented as thin figures with idealized, fleshy faces, while the other figures are wrinkled and either show their age through weight loss or gain.[36] These characteristics emphasize the differences between the figures and possibly allude to the future of the youths.

A comparison of these Boitard images with the print of Hannah Snell (Figure 33 in Part 1) supports the assertion that he drew Hannah from life and possibly did so in order to increase her popularity and verify her account. Hannah's position in the foreground, her contrapposto stance, and her figure form have parallels in Boitard's other prints. These similarities emphasize Boitard's overall style. For example,

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+john+daniel&source=web&ots=gjDKAshLuF&sig=iKmFKWFOxgViuU7mwppOR2xkwQc&hl=en#PPA1,M1

[35] For this story, see Robert Paltock, *The Life and Adventures of Peter Wilkins* (London, Reeves & Turner, 1884).

[36] For other artwork attributed to L.-P. Boitard, please see Louis Philippe Boitard, *Louis Philippe Boitard: artist file: study photographs and reproductions of works of art with accompanying documentation 1920-2000* available from the Frick Art Reference Library. I, however, question whether the included drawings are really the work of Boitard. All depict more conventional figure types, even more so than those in *The Harlot's Nurse and The Prodigal's Nurse*. Some of the artworks are attributed to L.-P. Boitard the Elder and the dates given are 1738 to 1763. I have not encountered Boitard "the Elder" in any other source, which leads me to think that despite the dates, some of these works could have been created by Boitard's father, François Boitard, and that there has been some name confusion. To see these images, please refer to Figures 10-13 in the appendix at the end of Part 2.

Hannah stands in the foreground of a deeply receding landscape that includes action in the background; on the left soldiers are shooting each other at close range, while on the right ships are firing cannons in the distance. Boitard employed a similar use of space in his other prints. Figure 1 from *The Scribleriad* contains a great deal background action. There are several groups of densely packed people, distant scenery, as well as the imaginary creatures already discussed. The greatest comparison is found, however, in *British Resentment* (Figure 7); it is similar to the print of Hannah in spatial organization. There is action on the left, a central figure or group of figures, and ships on the right. There are also similarities in figure composition. The central figure and Hannah stand with a comparable contrapposto; they both place the majority of their weight on their left foot. This contrapposto stance can also be seen in Figures 3 and 4 of *The Life and Adventures of Peter Wilkins*.

Hannah Snell's figure also has parallels in Boitard's other works. Many of his works contain elongated figure forms; some are subtle, like the figures in *The Harlot's Nurse*, and some are extreme, like the figure in *A Narrative of the Life…of John Daniel*. There are also striking similarities between the facial characteristics of the youths in *The Harlot's Nurse* and *The Prodigal's Nurse* and those of Hannah. They all share the deeply set eyes, strongly outlined eyebrows, and fleshy faces. However, Boitard engraved the two moral images and did not design the originals; he did the opposite for the print of Hannah Snell, designing the image, which was then engraved by B. Cole.[37] Nevertheless, because of the striking resemblances of the figures, it is possible that the two moral images were taken from paintings and Boitard employed

[37] The artist attributions are included in the text block below the figure of Hannah. The text states "Boitard ad vivam delin." (Boitard drew her from life) and "B. Cole Sculpsit" (B. Cole carved it).

artistic license with the design. Another explanation could be that he developed a style while engraving the moral images, which he continued to use when drawing the image of Hannah. All three were created at approximately the same time, 1750. Based on the facial evidence of these figures and the other comparable characteristics of Boitard's prints, the design of the print of Hannah Snell is surely by the hand of Boitard, and not an elaboration by B. Cole.

An image of Hannah
(*The Female Soldier*, ii)

Although Boitard seems to have depicted Hannah in accordance with his artistic style, he did not neglect her unusual qualities, but rather emphasized them. Hannah Snell was an unusual woman who led an unusual life and was portrayed as such. Dressing as a man in order to join the British Army and Navy, she became a hero for her "fair sex."[38] Boitard has depicted her in military uniform and with many masculine qualities, yet she still maintains a feminine air (see the print in Part 1). She looks very much like a man; however the curving lines of her face hint at her true gender. This mix of traits re-enforces her unusual character and entices the viewer to learn of her story. Stories of female soldiers and sailors were not new in the eighteenth century but hers was an intriguing case, "a fascinating middlebrow formulation of a lower-class heroine and her ballad-like story."[39] She claimed that no

[38] *The Female Soldier; or, The Surprising Life and Adventures of Hannah Snell (1750)*, introduction by Dianne Dugaw (Los Angeles, California: William Andrews Clark Memorial Library, University of California, 1989), 41.

[39] Dianne Dugaw, introduction to *The Female Soldier*, [v]. For more on female heroine ballads, their popularity, and how they are evidence of a preoccupation with the concept of gender, see Dianne Dugaw, *Warrior Women and Popular Balladry, 1650-1850* (Cambridge: Cambridge University Press, 1989). Also see Julie Wheelwright, *Amazons and Military Maids: Women Who Dressed as Men in the*

one ever suspected her true sex during the five years she was enlisted in military service, and it was this assertion that led to her fame, both in the eighteenth century and today.

Image of Hannah Snell similar to the print by Boitard (Dowie, ed., *Women Adventurers*, 54)

During her time, books were circulated describing her great virtue and heroism. Her account is written in such a way that "the narrator places Hannah Snell in the epic company of the Amazons and of Cleopatra and Semiramis on the one hand, and the pastoral band of '*Arcadian* Shepherdesses' on the other."[40] Robert Walker, a successful London publisher, helped to popularize her account *The Female Soldier; or The Surprising Life and Adventures of Hannah Snell* (1750), creating a long version and a shorter, less expensive version for the lower class. People from a range of social classes made her story "a best seller and her portrait was sold on every street corner."[41]

It is likely that the portrait by Boitard was used as an advertisement to increase Hannah's popularity and justify her request for a military pension. Comparing Boitard's print to the image printed on the title page of Hannah's account in *Women Adventurers*, also shown in Figure 14, one can see that the figure of Hannah is the

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Pursuit of Life, Liberty and Happiness (London: Pandora Press, 1989). "Aside from newspaper reports that recorded an occasional discovery, there is rich material evidence of these women's existence in ballads, song dramas, and court cases from earlier centuries," 6-7. Also, there were more than 100 female warriors "who surfaced in more than 1,000 variations of Anglo-American ballads," 8.

[40] Ibid., ix. The interior quote is from *The Female Soldier*, 2.

[41] Matthew Stephens, *Hannah Snell: The Secret Life of a Female Marine, 1723-1792* (London: Ship Street Press, 1997), 9. For more depictions of Hannah Snell, see Figures 14-17. Such a variety of portraits illustrates her popularity. Freeman O'Donoghue, *Catalogue of Engraved British Portraits, Preserved in the Department of Prints and Drawings in the British Museum* (London: Oxford University Press, 1914), 139 provides a list of portraits of Hannah Snell (given in Figure 18). Boitard is not listed, however.

same, suggesting the images are connected. It isn't acknowledged that Boitard and Walker had a business relationship, but there is a curious relationship between the two images. Boitard's print was probably a portfolio or poster print that was also sold to the various classes and includes some of the text also present in Hannah's published account. However, the Boitard image has been cropped and much of the text has been lost. What remains is as follows: "HANNAH SNELL the Female Soldier; Her Affidavit Sworn before the Rt Hon[ora]ble [J]ohn Blachford [Esquire] Lord Mayor of the City of LONDON; Hannah Snell, born in the City of Worcester in the Year of our Lord One Thousand seven Hundred & twenty-three & who took upon her the Name of James…" The fact that Boitard included that she swore her affidavit may be evidence of the print being used as justification for a pension. Because the title page and Boitard's print share much of the same text and a similar figure form, they raise an interesting question – Which came first, the published autobiography or the print?

Hannah's popularity has waned over time, but two hundred and fifty years later, we still remember her in plays and as a feminist pioneer. Yet like many tales that have been retold over the centuries, hers has seen changes and raised many questions. Matthew Stephens and George and Anne Forty are the main investigators into Hannah's story, but they disagree about many aspects. What is true and what is false within her story may never be determined, but Hannah certainly made a name for herself by publishing it. It is the contention of this study that while she joined the military and the facts of her life made her a feminist role model, the embellishments within her story made her so renowned. Hannah's most important claim, that she hid

her gender even under extraordinary circumstances, separates her story from other similar tales.

Hannah was born on April 23, 1723 in the parish of St. Helen's, Worcester, England. According to public records and her account, Hannah came from a military family. Her father was a hosier and dyer, but her grandfather, Samuel Snell, fought in the Peninsula Wars and was involved in at least twenty-two battles.[42] Hannah was apparently interested in her grandfather's campaigns for she played military games as a child.[43] Of her eight siblings all but one were connected to the military by being a soldier, sailor, or the wife to one.[44] It is, therefore, easy to believe that "bravery ran thick in the veins of the Snells."[45]

On January 6, 1744, or 1743 in some accounts, she married the sailor James Summs, but he turned out to be an unfaithful husband:[46]

> Since, though she had Charms enough to captivate the Heart and secure the Affection of any reasonable Man, yet she was despised and condemned by her Husband, who not only kept criminal Company with other Women of the basest Characters, but also made away with her Things in Order to support his Luxury and the daily expenses of his Whores.[47]

According to the Fortys, James left her after seven months to return to sea; however, they question whether Hannah truly believed he had left her for good. She later bore his daughter who died about seven months later, and since she had heard no news from her husband, assumed he had indeed abandoned her.[48] Hannah's own account, as well as later versions, stress James' unfaithfulness; there seems to be no

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[42] Ménie Muriel Dowie, ed., *Women Adventurers* (London: T. Fisher Unwin, 1893), 62.
[43] George and Anne Forty, *Women War Heroines* (London: Arms and Armour Press, 1997), 96.
[44] Dowie, ed., 63.
[45] Stephens, 13.
[46] George and Anne Forty claim that she was married in 1743, 96.
[47] Dowie, ed., 64 and *Female Soldier*, 6.
[48] There is some discrepancy over the death of her daughter. According to Julie Wheelwright, Hannah's baby only lived a few days, 171. I have not found this information in any other source.

question of his rotten intentions and the hardships he brought her. Whatever the truth may be, Hannah decided to search for her husband and stole her brother-in-law's suit. She took his name, James Gray, set off to join the military on November 23, 1745, and joined Colonel Guise's regiment.[49] After a short stay in the army, she joined the navy and was sent aboard the *Swallow* all the while continuing her search.

The rest of her life story is less well known. There is no doubt that she joined the military. However, there are many aspects of her narrative that are questionable; namely the extent of her ability to hide her gender. Hannah states that she was able to successfully pass as a man the entire time she was enlisted, despite receiving whippings, serious battle wounds, and the fact that she never had to shave. She claims luck was in her favor. Her masquerade and its supposed success are what made her famous.

Hannah's claim likely led to embellishments within her story. Many of the scenarios are unlikely, and were probably included to emphasize her unique character. Matthew Stephens theorizes which parts of Hannah's story are overstated and which parts are fabricated.[50] He claims that while stories of female soldiers, or the "notion of disguise," was nothing new, Walker's version was directed more towards the "wealthier, novel-buying readers" while ballads of similar women were more popular for the lower class.[51] Stephens compares Walker's autobiography against available primary sources and discovers what he believes to be many inaccuracies in the

[49] This is according to her own account.
[50] In 1995, Jean Ryles discovered that she was a descendant of our famous soldier and took steps to learning more about her and her life. She contacted the author and researcher Matthew Stephens who began to search for the truth behind the tales.
[51] Stephens, 11. Which version of Walker's publication, short or long, is not specified; however, considering the wealthy clientele, he is probably referring to the longer, more expensive version.

popularized account. The foremost problem is how Hannah fooled everyone into thinking she was male.

In Walker's text, Hannah does not reveal how she managed to conceal her gender, but she was not the only eighteenth-century British woman to play this charade. Stephens quotes an account from 1740 of Christian Davies, who also masqueraded as a man:

Christian Davies
(*The British Library*,
Wheelwright,
btw. 34 and 35)

> Having thus ordered my affairs, I cut off my hair, and dressed me in a suit of my husband's, having had the precaution to quilt the waistcoat, to preserve my breasts from hurt, which were not large enough to betray my sex, and putting on the wig and hat I had prepared, I went out and bought me a silver-hilted sword, and some Holland shirts.[52]

Hannah could have easily dressed in a similar fashion. In her account she also claims that her breasts were small enough not to attract notice. However, while in the army, there is at least one incident where her breasts could have given her away, but Hannah explains how she was able to avoid suspicion. One of her superiors, Sergeant Davis, wished to seduce a young woman in Carlisle and ordered Hannah to help him. Hannah warned the woman of his intentions, and as a result, Davis took her to be a rival and punished her with 500 lashes.[53] While receiving them, she would not have been wearing a shirt. Walker's explanation for how she perpetrated her disguise seems to be too coincidental to be true:

> At that Time her Breasts were but very small, and her Arms being extended and fix'd to the City Gates her breasts were towards the Wall, so that there

[52] Dowie, ed., 221. Also quoted in Stephens, 17. For more on Christian Davies, also see George and Anne Forty, who refer to her as Christina Davies

[53] Forty, 96. She was originally sentenced to 600 lashes, but supposedly an officer present at Hannah's lashings spared her the last one hundred because he was "so impressed by her 'unflinching fortitude.'"

> was little or no Danger of her Comrades finding out the important Secret which she took such uncommon Pains to conceal.[54]

Beyond the fact that it is very unlikely that someone could have survived that number of whippings, are we to believe that they allowed her to walk up to the gate and have her hands tied before they removed her shirt? Nevertheless, we deduce that Hannah was able to stay conscious in order to hide her chest after her punishment.[55] Surely this part of her story has been embellished, if it occurred at all. However, by including it, both her virtue and the claim that she hid her gender are emphasized.

There are probably many more overstatements and false events within her story. Even if by incredible luck Hannah managed to hide her breasts during such horrible punishment, how did she hide her other differences? For example, she would have had to hide her menstrual periods and her inability to grow a beard. Stephens states that based on the extremely poor diet of the sailors, it is possible that her natural cycle stopped for a time. It is also possible that such bleeding could have been seen as a venereal disease, which was fairly common.[56] Hannah mentions nothing about this; however, she describes the teasing she received about her hairless face. When such attention arose, she would find ways to avoid suspicion.

> As these taunts, however, were only thrown out in jest, she would return the compliment not only with a smile and an oath, but with a challenge of the best sailor of them all…to prove herself as good a man as any of them on board.[57]

Beyond Hannah's ability to conceal her gender, Stephens questions other aspects of her narrative. Based on primary documents, such as ship logs and marriage

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[54] Dowie, ed., 113.
[55] Stephens also questions how Hannah concealed her sex during her beatings, 19.
[56] Ibid., 23.
[57] Dowie, ed., 95.

certificates, he states that the account popularized by Robert Walker cannot be completely true, for some of his dates are incorrect. He then concludes that it is possible that Hannah's story is really about two individuals being mistaken for one, a plausible deduction. Recall that Hannah took her brother-in-law's name when she joined the military. It is, therefore, entirely possible that she joined the military after her brother-in-law returned from service and then embellished her story with the help of Walker.[58] According to an 1892 account, the real James Gray deserted the army and was willing to let his sister-in-law claim that his actions were her own. This would save himself and provide a livelier story, and therefore profit, for Hannah.[59] If this is truly the case, it was the real James Gray who received the lashes, if any had been given at all.

The date of Hannah's recruitment is only one of the numerous "chronological time-shifts" identified by Stephens.[60] Another is the date of her daughter's death. According to parish records from St. George-in-the-East, Middlesex, "Susanna Sums" was born nearly a year later than Hannah claims.[61] This supports the above hypothesis that Hannah did not join the military until after her brother-in-law deserted.

The most significant contradiction, however, deals with Hannah's wounds received in Pondicherry, India. According to her account, she waded across a river under continuous fire from the French and was shot twelve times below her waist. All were in her legs except one that was lodged in her groin. She extracted that one on her

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[58] Stephens, 21. This idea accounts for some inconsistencies. Supposedly Colonel Guise's regiment was not in England at the time Hannah claims to have enlisted. This could have been an easy mistake for someone embellishing a story. Furthermore, Hannah states that she joined the army, deserted, and then joined the navy. There would be no reason to do this if she were under the impression that her husband had joined the navy in the first place.
[59] Ibid. Stephens cites a letter signed by 'M.' in *Notes and Queries*, 8th S. II. Dec. 3, '92, p. 455.
[60] Ibid., 20.
[61] Ibid.

own after permitting doctors to remove the eleven in her legs. This incident certainly separated her from other female soldiers, but it cannot be verified. According to naval records, no one by the name of James Gray was injured at Pondicherry.[62] This does not mean that Walker and Hannah completely fabricated the story, however. A soldier named James Gray was admitted to the hospital in Devicotta about six weeks after the battle at Pondicherry (Figure 19), so it is possible the locations were confused or Walker has used his "time-shift technique to suit his own narrative purposes."[63] The battles at Pondicherry would have been well known compared to those at Devicotta; it is likely that the more familiar location was chosen.[64] Stephens speculates further on whether Hannah's hospitalization after Devicotta was due to illness rather than wounds. This hypothesis "explains why Walker and Hannah [would find] it necessary to manufacture Hannah's wounds at Pondicherry, as without them, she was not entitled to a military pension."[65] After recovering from these wounds and discovering that her husband had been executed for murder, she returned to England.[66] She made sure she was paid her due and then told her story to her comrades, revealing her secret for the first time.

Based on the evidence, it is not hard to suggest Hannah and Walker colluded to embellish her life story. Walker was a well-known individual, "a maverick figure in the publishing world of this period…an adventurous businessman who was not averse

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[62] Ibid., 29.
[63] Ibid., 31.
[64] Ibid.
[65] Ibid., 33.
[66] The majority of sources claim that James Summs was tied in a bag with rocks and thrown into the sea; however, Wheelwright in *Amazons and Military Maids* claims that he was hanged for murder, 146. This is the only source I have found that states he was hanged. This source also confuses his name, first calling him James and then John.

to sensationalism."[67] His publication was distributed widely and portraits of Hannah were sold on the streets. She became a household name. Her popularity inspired poems and ballads that compared her to the greatest of male heroes. One such poem goes as follows:

THE FEMALE SOLDIER
Hannah in briggs behaved so well
That none her soft sex could tell;
Nor was her policy confounded
When near the mark of nature wounded;
Which proves that men will scarce admit,
That women are for secrets fit.
That healthful blood could keep so long
Amidst young fellows hale and strong
Demonstrates, though a seeming wonder,
That love to courage truckles under.
Oh, how her bedmate bits his lips,
And marked the spreading of her hips,
And cursed the blindness of his youth,
When she confessed the naked truth!
Her fortitude, to no man's second,
To woman's honour must be reckoned.
Twelve wounds! 'Twas half great Cæsar's number,
That made his corpse the ground encumber.
How many men for heroes nursed,
Had left their colours at the first.
'Twas thought Achilles' greatest glory
That Homer was to sing his story;
And Alexander mourned his lot
That no such bard could then be got –
But Hannah's praise no Homer needs;
She lives to sing her proper deeds.[68]

As the last line of this poem states, Hannah lived to relate her tale on the stage. She sang ballads and performed her military exercises (Figure 20).[69] When her popularity

[67] Stephens, 38-39.
[68] Dowie, ed., 123.
[69] Ibid., 125. One of her ballads goes as follows: "All ye noble British spirits That midst dangers glory sought Let it lesson not your merit That a woman bravely fought. Cupid slyly first enrolled me Pallas next her force did bring Pressed my heart to venture boldly For my love and for my king. In the midst of blood and slaughter Bravely fighting for my king Facing death from every quarter Fame and glory there

waned, she opened a public house called *The Widow in Masquerade* (or *The Female Warrior*), for which the signs, one side showing her dressed in her coat and trousers and the other in regimentals, had a great effect; her well-known story attracted numerous customers.[70]

Many accounts of Hannah's life end here. She stated her intentions of opening this public house and of never remarrying.[71] However, evidence supports that she changed her mind, and here also, researchers disagree. According to the Fortys, Hannah married Samuel Eyles in 1759. They had one son and Samuel died in 1772.[72] Stephens, on the other hand, claims that Hannah married a Richard Eyles and had two sons, George Spence Eyles and Thomas Eyles.[73] Stephens provides a marriage certificate to support this claim (Figure 21). Additionally, Stephens was contacted by Jean Ryles (not to be confused with Eyles), who claims to be a direct descendant of Hannah and inspired him to begin researching this woman warrior. After her second

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to bring. Sure you'll own 'tis more than common And the world proclaims it so Never yet did any woman More for love or glory do."

[70] *The Widow in Masquerade; or The Female Warrior; Containing a Concise Narrative of the Life and Adventures of Hannah Snell, Who Served with Credit for Several Years in the British Army and Navy* (Northampton, 1809), 16. Also see Dowie, ed., 129.

[71] This, along with parts of her account, could raise questions of her sexuality. She states that she flirted with women while masquerading, bought men's clothes even after her return, and did not want to get married again and have a man rule her, Dowie, ed., 128. She claims to have gone so far as to propose to a woman to have an excuse not to go to brothels. For information on homosexuality, see Alan Bray, *Homosexuality in Renaissance England* (New York: Columbia University Press, 1995). According to Bray, during this time, "female homosexuality was rarely linked in popular thought with male homosexuality… [its history is] best to be understood as part of the developing recognition of a specifically female sexuality," 17.

The fact that Hannah did remarry, however, illustrates that "although they [women warriors] appeared to rebel against women's position in society, these characters were ultimately resigned to it. The inverted women of these dramas accepted marriage as a preferable alternative to prostitution which was considered the only option for sexually independent women. Female soldiers in this context advocated change, not revolution and served to clarify the importance of sexual difference," Wheelwright, 8. Despite the fact that they advocated change, some women warriors were thought to express the "ideal of women's sexual purity if they retained their virtue amongst an all-male regiment," Ibid., 75.

[72] Forty, 100.

[73] Stephens, 48-49.

husband died, Hannah married Richard Hapgood; but unfortunately, as she aged, she began to show signs of insanity.[74] She was sent to Bethlehem Hospital (or Bedlam) and died on February 8, 1792.[75]

The details of Hannah's story certainly separate her from other female heroines. Stories of warrior women were fairly common during the eighteenth century. Numerous women masqueraded as men for various reasons.[76] Some popular reasons include a strong sense of patriotism, love of adventure, economic difficulties, and the desire to have lesbian relationships.[77] Although we are not sure why Hannah would risk her life for a man who did not love her, "the female pursuit of a male lover sent to war is probably the most common explanation cited in the many ballads sold on the streets at this time."[78] For example, Christian Davies disguised herself as a man and left in search for her husband, whom she loved dearly.[79] It appears that Hannah's story is a unique twist of this common theme.

Like Hannah, many disguised women boarded ships. Three women, Mary Anne Talbot, Mary Read, and Anne Bonny tell similar stories, but Hannah's continues to be exceptional. These women became famous for different reasons than Hannah, and therefore substantiate, by their contrast, her unique character.

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[74] The research of Julie Wheelwright in *Amazons and Military Maids* seems to support the research of George and Anne Forty, for it states that Hannah first married a Samuel Eyles and then a Richard Hapgood.
[75] Stephens, 52. Also see Forty, 100.
[76] See Wheelwright. She states that some women dressed as men for lesbian relationships and lived with other women as married couples. Others masqueraded as men in order to get better jobs.
[77] Stephens, 17.
[78] Ibid.
[79] Christian Davies' account can be found in Dowie, ed., 200-288.

Like Hannah, Mary Anne Talbot had trouble with men. She was tricked by her guardian and forced to enlist in the army as a drummer under the name of John Taylor. She fought at the battle of Valenciennes, was shot twice, and just as Hannah had claimed, had to treat the wounds herself. On her eventual return to England, she revealed her gender; however, there were those who had already known her secret.[80] Therefore, Hannah's insistence on her own ability to hide her gender singles out her story. The closing sentence of Mary Anne's account states that she published her story with "the pious hope that [it] would 'serve as lesson to future guardians and those under their care, in avoiding the troubles I have experienced.'"[81] It seems, therefore, that it was not an attempt to attract attention and raise her popularity. Hannah's account on the other hand, constantly stresses her virtue, uniqueness, and valor; additionally, much of her account functions as evidence of her experiences in order to advertise and receive a military pension.[82]

Mary Anne Talbot
(*The British Library*,
Wheelwright,
btw. 34 and 35)

Portrait of Mary Anne
Talbot, 1804
(*The British Library*,
Wheelwright,
btw. 162 and 163)

[80] There were some on the ship that knew her gender and she revealed her secret when she was seized by a press-gang on her return.
[81] Forty, 91. The interior quote can be found in Dowie, ed., 194, taken from her account by Robert S. Kirby in his second volume of his *Wonderful Museum or Magazine of Remarkable Characters including all the Curiosities of Nature and Art* of 1800. Mary Anne died only 8 years later at the age of thirty.
[82] However, portraits of Mary, such as the one provided, also emphasize her unusual story by stressing her masculine character. Note her elongated, over-muscular arms.

Mary Read
(Adam Forty, The Fortys, 93)

While some women dressed themselves as boys, either for their own reasons like Hannah, or for other people's purposes, like Mary Talbot, there were also those who had to conceal their gender since infancy. Mary Read was treated and raised as a boy from the time she was a toddler to hide the fact that she was illegitimate. When Mary was older and told of the secret, she was accustomed to wearing boys' clothing and "agreed to continue the deception.[83] However, while Hannah was known for her extraordinary exploits and virtue, Mary Read was known for her piracy. She did not keep her gender a secret like Hannah, and when she fell in love she "eventually managed to let [the man] discover that she was a woman, without appearing to have done so by design."[84]

Another masquerading woman known for her piracy and ruthless behavior was Anne Bonny. She sailed with Mary Read, was the secret lover of the captain, and like Mary, was an illegitimate child who was passed off as a boy. It was said that she eventually became

> the real boss: 'And that same Anne, under the fitful gleam of the ship's lanterns, grim-lipped, eyes sparkling with determination, naked steel in fist, utterly ruthless and unscrupulous, the real soul of the enterprise, as brazen as it was desperate…' Together [she and her lover] they embarked on a series of voyages that made them the scourge of the seas, feared by all who sailed those waters.[85]

Despite their fascinating adventures and fame, these women endured continual hardships and met unhappy endings. Hannah never found her first husband and died in

[83] Forty, 91.
[84] Ibid., 92.
[85] Ibid., 95.

an asylum; Mary Anne Talbot died of her adversities and wounds; and Mary Read and Anne Bonny were eventually captured by a government sloop. They were both tried and found guilty; however, both were found to be pregnant and so were sentenced to hang sometime after giving birth.[86] Perhaps it is not only the peculiar character of these women that made their stories popular, but also their mix of adventure and tragedy.[87]

Hannah Snell's fame has oscillated over time. She was most famous in the eighteenth century when her story and portrait were sold on the streets. From the eighteenth century to the present, her tale has occasionally sparked the interest of authors who have used her as a heroic figure. After her death, not much was written about her until the latter half of the nineteenth century when Charles Dickens included her in a work focusing on "British Amazons."[88] Other writers soon picked up her tale. At the beginning of the twentieth century, there was another decline despite the fact that writers, such as Bram Stoker in his *Famous Imposters*, adapted her life into their own versions.[89] Then in the 1970s she became a heroine again in the feminist movement. The rock opera *The Scurrilous Adventures of Hannah Snell* revealed the "community's struggle with the women's liberation movement."[90] Before, she was remembered for her ability to hide her gender; here, she became a woman of great

[86] Mary died of a fever before her child was born. No one knows what happened to Anne Bonny. There are no records of her hanging or dying in prison.
[87] Short versions of these stories can be found in Forty, 86-95.
[88] Stephens, 56.
[89] Ibid., 57.
[90] Ibid.

feminist achievement. The most recent direct reference to Hannah was a 1991 play by Shirley Gee entitled *Warrior*; however Gee takes many liberties with her story.[91]

Based on the art historical research, the Colonial Williamsburg print identifying Boitard as the designer is significant. According to the text on the print, Boitard drew her from life by her consent. If this is true then the print likely served as evidence that Hannah used this as a justification for a military pension. An interesting topic for further research would be establishing if Boitard and Walker had a business relationship, specifically working together to make Hannah famous. Hannah's popularity also inspired other artists to copy her depiction, turn paintings into distributable prints, and circulate her portrait among the masses, further strengthening her fame (Figure 18). Because of the striking similarities between Boitard's print and the illustration in Walker's publication of Hannah's account, the Colonial Williamsburg print is likely the most official representation of Hannah Snell. Even if the two men didn't form a business alliance, Walker's publication and Boitard's print worked together to create the famous persona of Hannah Snell.

[91] This play has taken many liberties with Hannah's story. The play retells Hannah's life, emphasizing the mental trauma she might have suffered. However, Gee shifts focus from Hannah's virtuous character to Hannah as an innocent, mentally fragile woman in search of her loving husband. Gee writes that Hannah had psychic visions and implies that these visions, and not the fact that she hid her gender, inspired her fame. In this play, Hannah is not able to hide her gender from everyone; a faithful friend discovers her secret when helping her when she is shot. By stressing her insanity, it seems that Gee has used Hannah's femininity to stress the loss and devastation of war instead of using her account to stress her virtue.

Figure 1: *The Scribleriad*, image for Book II, L.-P. Boitard, 1751 (Blondel, 167)

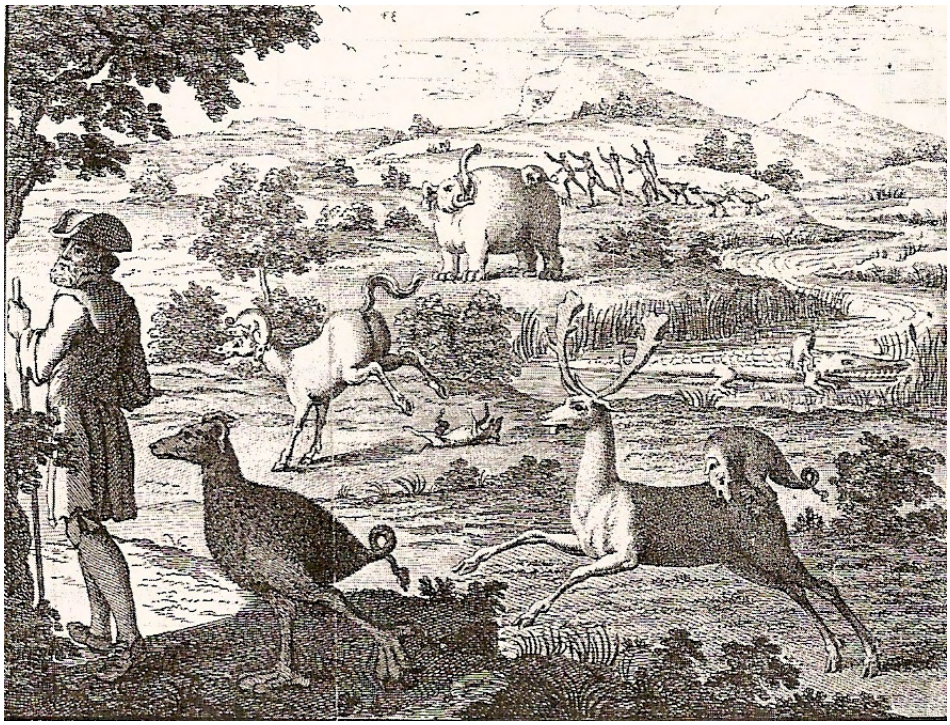
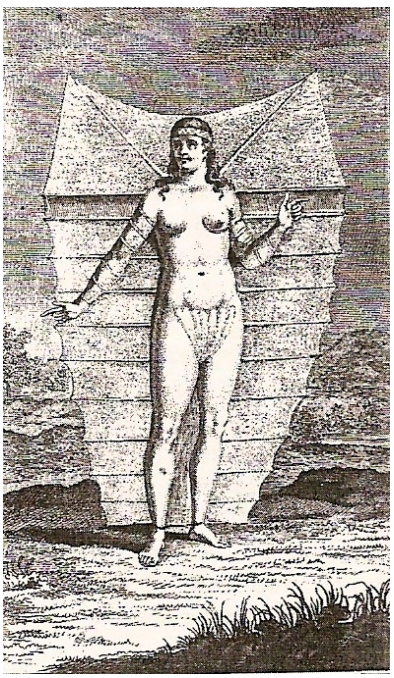


Figure 2: Image from *The Travels and Adventures of William Bingfield…with an account of the amazing animal the Dog-Bird*, L.-P. Boitard, 1753 (Blondel, 168)



Figures 3 and 4: Images from *The Life and Adventures of Peter Wilkins*, L.-P. Boitard, 1751 (Blondel, 169)

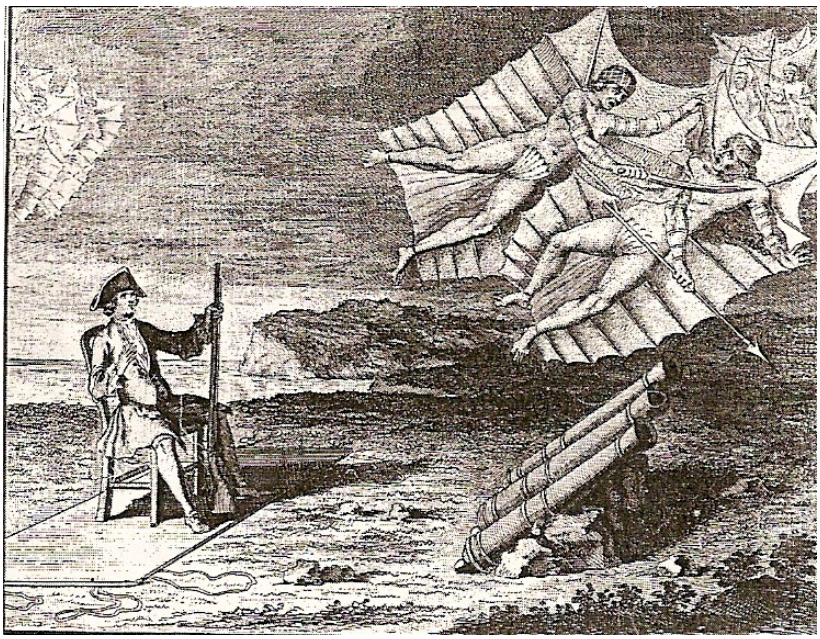


Figure 5: Image from *The Life and Adventures of Peter Wilkins*, L.-P. Boitard, 1751 (Blondel, 170)

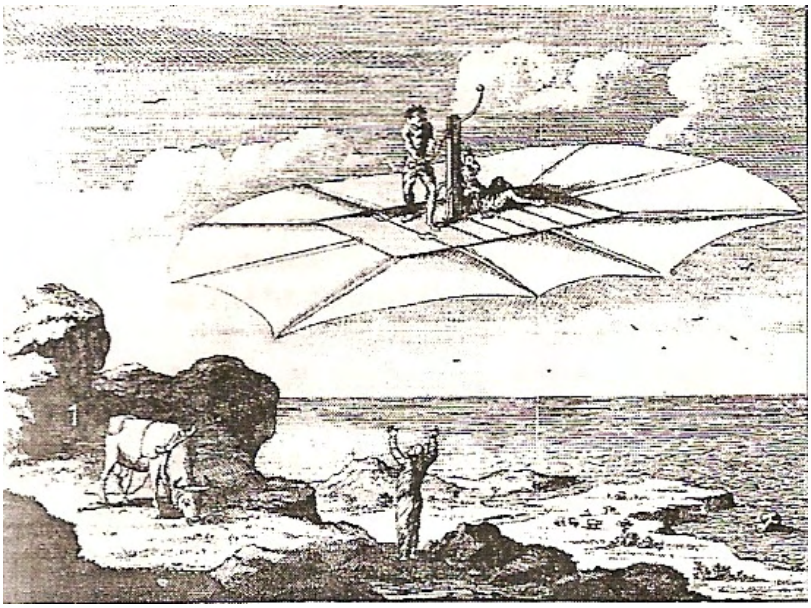


Figure 6: Image from *A Narrative of the Life of John Daniel*, L.-P. Boitard, 1751 (Blondel, 171)

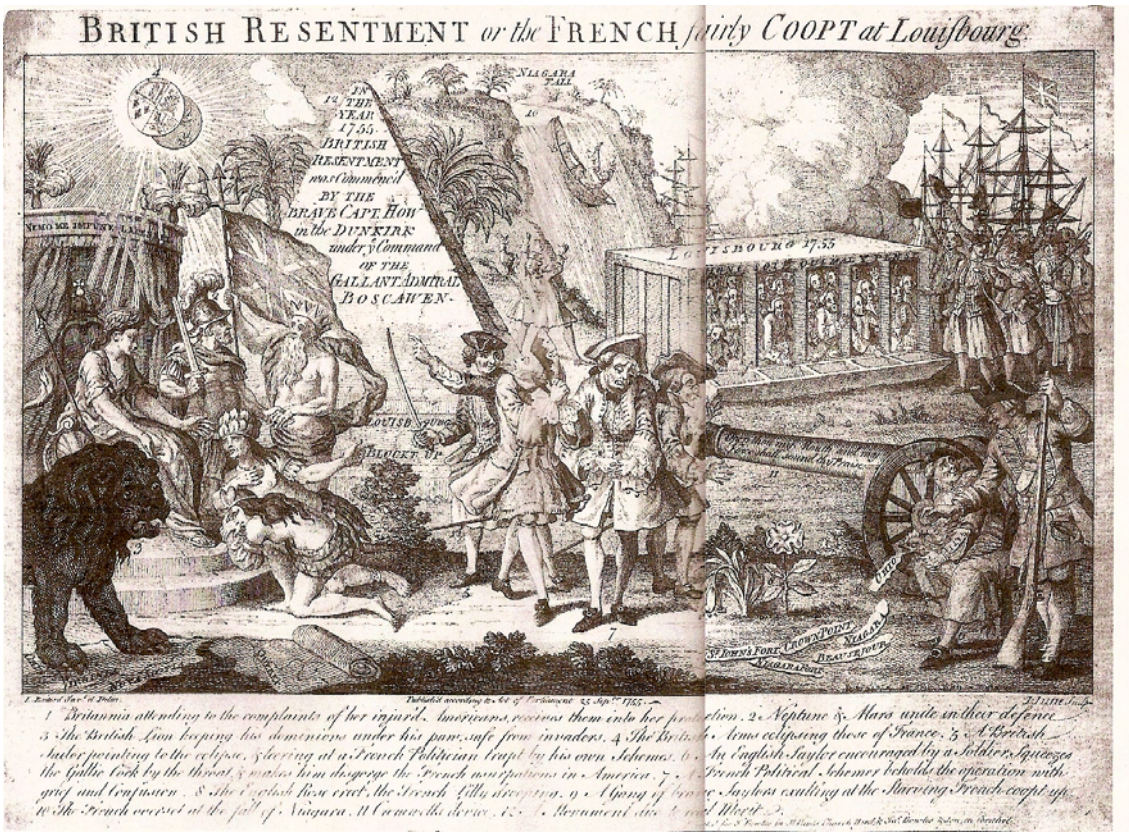


Figure 7: *British Resentment* or *The French fairly coopt at Louisbourg*, L.-P. Boitard

Figure 8: *The Harlots Nurse*, L.-P. Boitard, 1750

Figure 9: *The Prodigals Nurse*, L.-P. Boitard, 1750

Figure 10: *A Tea Party*, Louis-Philippe Boitard, pen and ink over pencil

Figure 11: *Sea Deity and her Train*, Louis-Philippe Boitard the Elder

Figure 12: *Putti on Clouds*, Louis-Philippe Boitard the Elder

Figure 13: *Scene from Greek Mythology*, Louis-Philippe Boitard

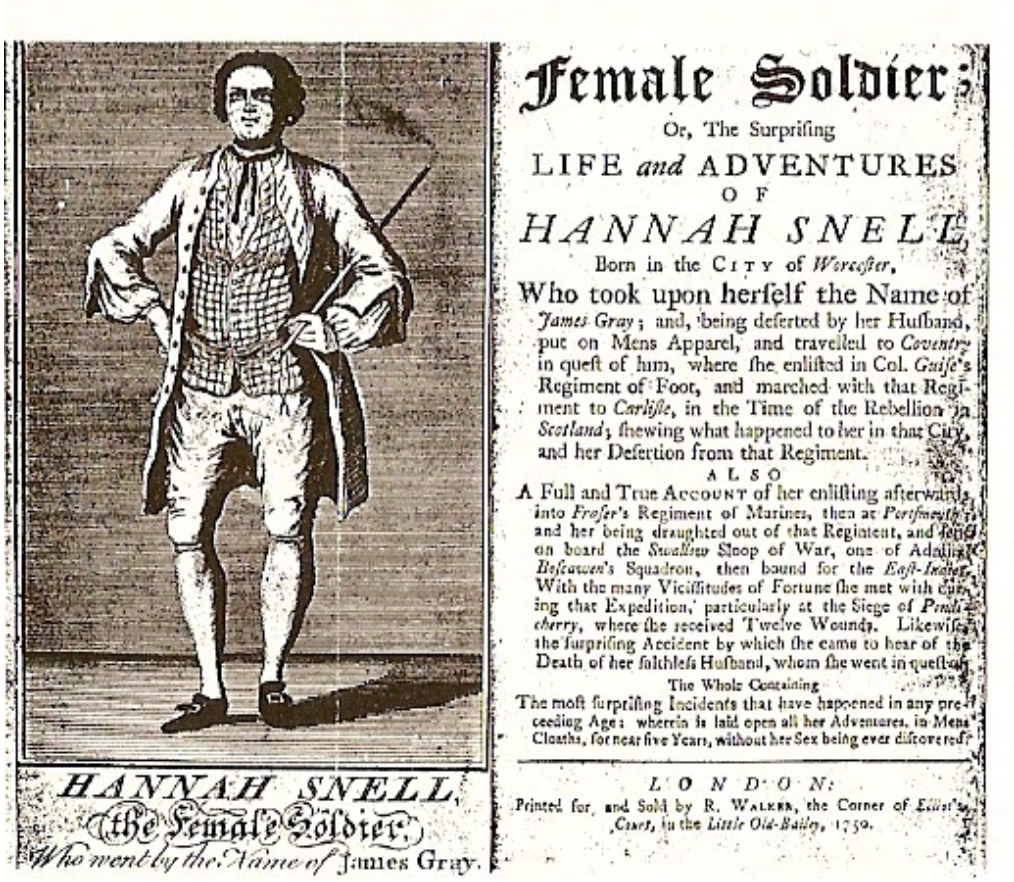


Figure 14: From the second edition of Robert Walker's version of Hannah's account (Stephens, 10). The text on the print conserved in Part 1 is similar to that on the right side of this image; however, due to the cropping of the print, it is not known how much of the text was included.

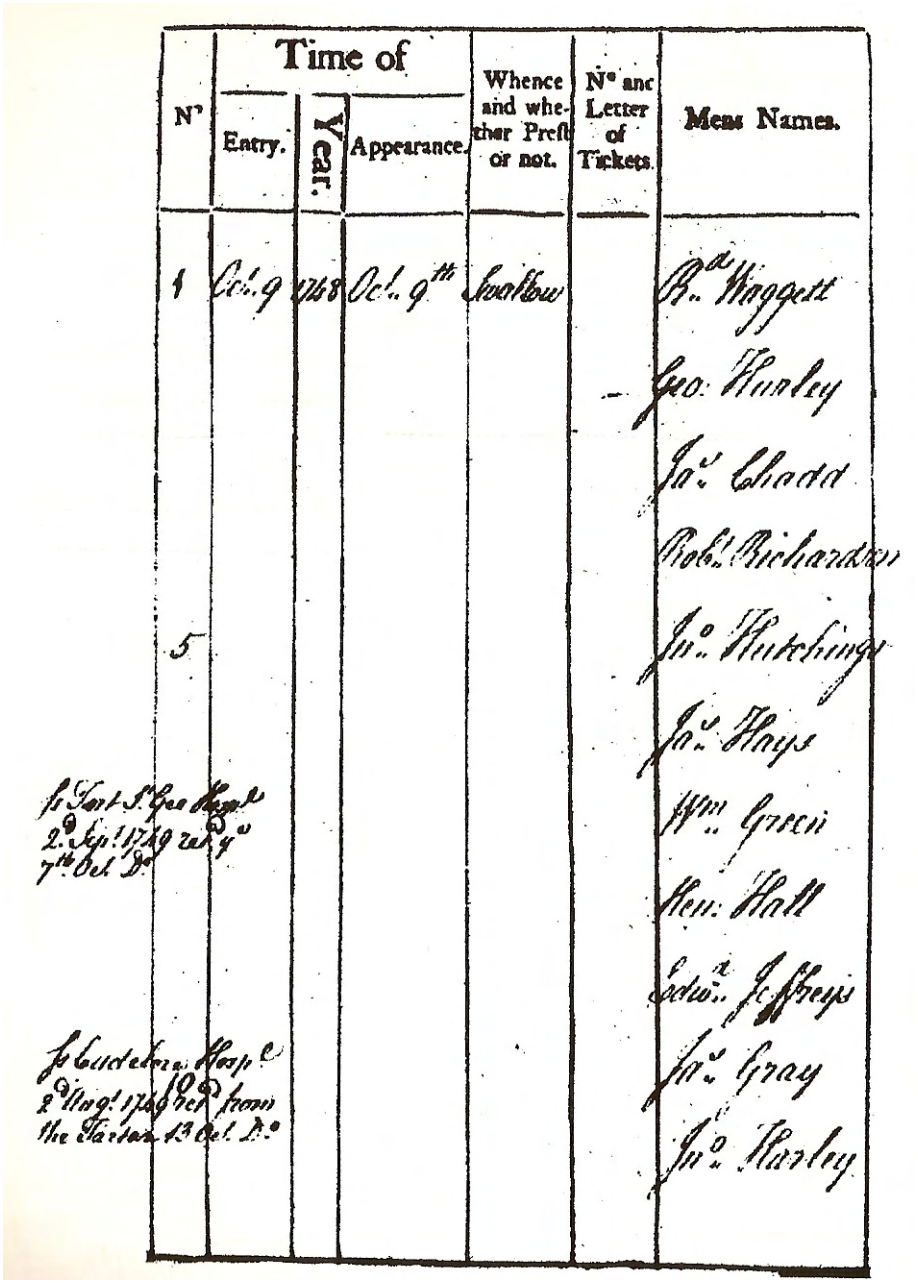
Figure 15: Portrait by J. Faber, 1750 (National Army Museum, Wheelwright, btw. 82 and 83). J. Faber is also included in the list of Figure 18.

Figure 16: Portrait of Hannah Snell sold in 1750 (Stephens, 40)

Figure 17: Woodcut, Portrait of Hannah Snell (*Freedom: A History of US*, http://www.pbs.org/wnet/historyofus/web02/features/see_it_now/1770.0053.html)

SNELL, HANNAH; female soldier; 1723–1792.		
1. H. L., to r., in male attire with cocked hat, carrying stick under l. arm; 1750. (C. S. 334.) Mezz.; 10½ × 9 in. Two impressions.	**R. Phelps**	**J. Faber jun.**
2. Copy from the last. Pub. G. Eyles 1789. (C. S. 62.) Mezz.; 9 × 7½ in.	„	**J. Young**
3. Another copy. Pl. to Caulfield's *Remarkable Persons*, 1820. Stipple; 5¾ × 4⅝ in.	„	**T. Maddocks**
4. Another copy; bust only. Pl. to Kirby's *Wonderful Museum*, 1804. Stipple; 5⅛ × 3⅝ in.		**G. Scott**
5. H. L., to r., in cocked hat, r. hand thrust into coat; account of her below. Pub. T. Jefferys. (C. S. p. 388, No. 219.) Mezz.; 10¾ × 9 in. [This is J. Faber's plate of C. Lempriere, after Frye, with face altered.]	**J. Wardell**	**J. Johnson**

Figure 18: Catalogue of the portraits of Hannah Snell (O'Donoghue, 139). Boitard is not listed.



N°	Time of Entry.	Year.	Time of Appearance.	Whence and whether Prest or not.	N° and Letter of Tickets.	Mens Names.
1	Oct. 9	1748	Oct. 9th	Swallow		B. Waggett
						Geo. Hunley
						Ja. Chadd
						Robt. Richardson
5						Jno. Hutchings
						Ja. Hays
						Wm. Greeii
						Hen: Hall
						Edwd. Jeffreys
						Jno. Gray
						Jno. Hunley

Figure 19: Document showing Hannah's admittance into hospital August 2, 1749 (Stephens, 32)

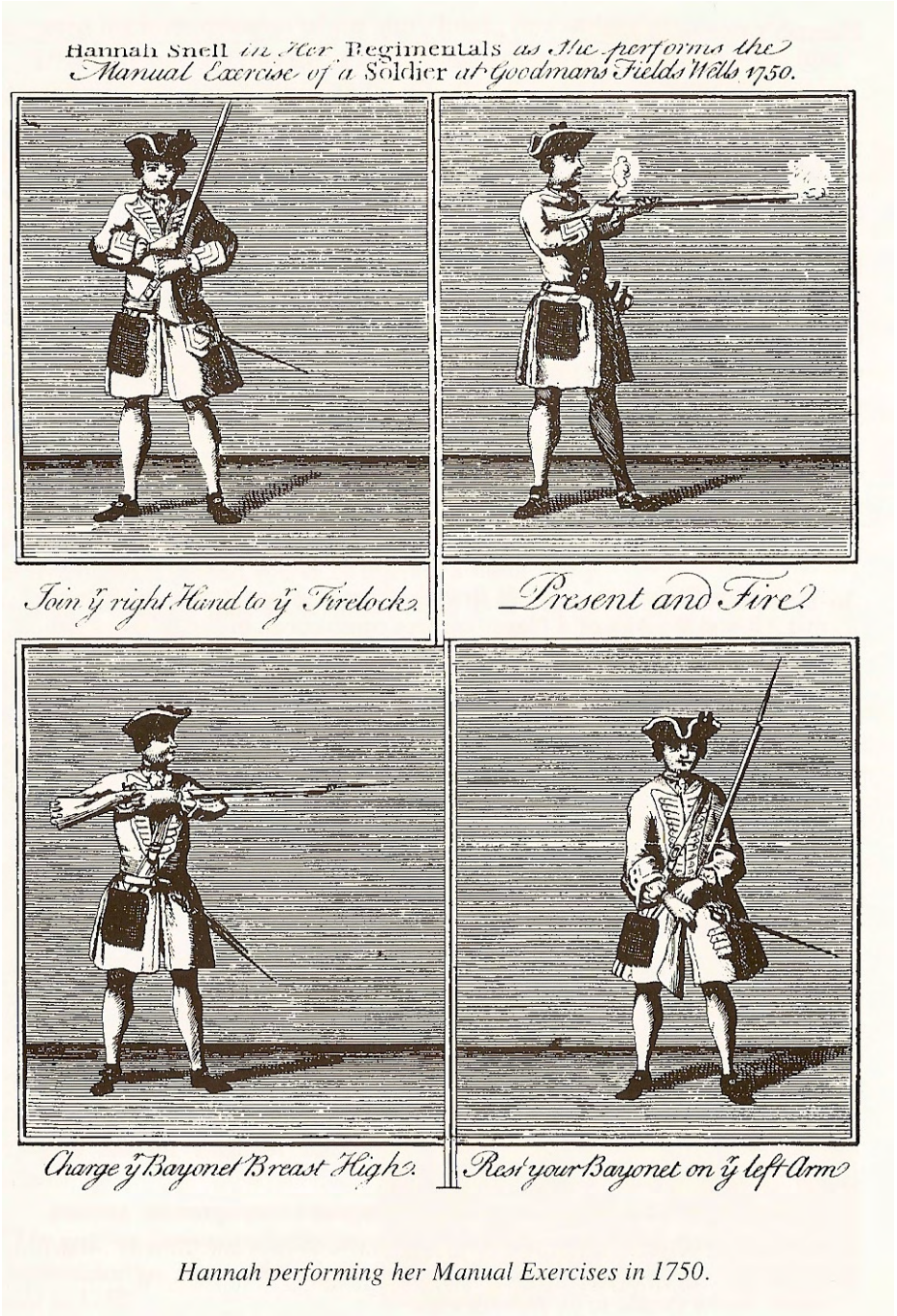
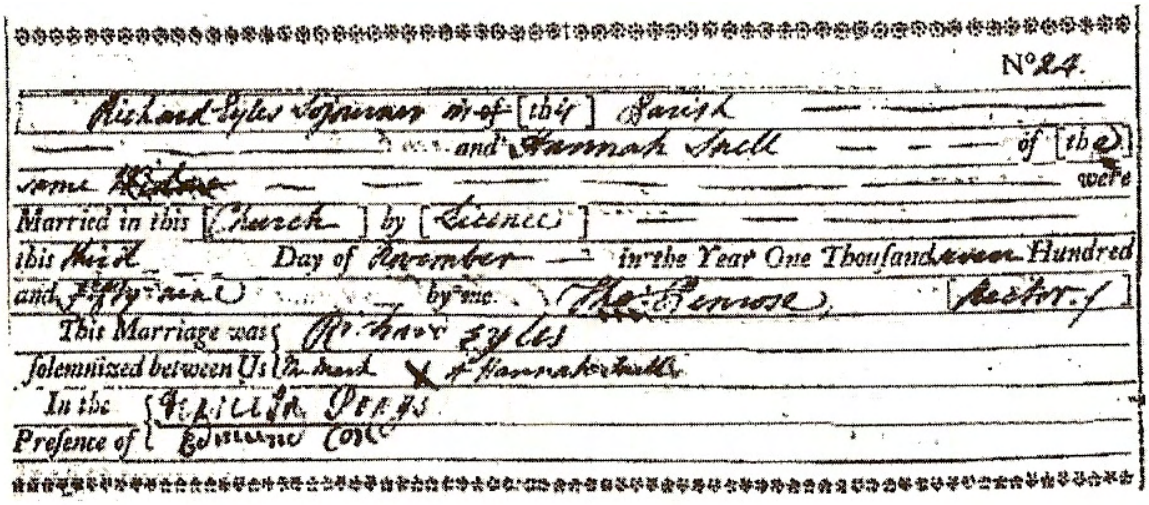


Figure 20: Hannah's military exercises (Stephens, 42)



N°24.

Richard Eyles Spinster of [this] Parish
and Hannah Snell of [the]
same
were
Married in this [Church] by [License]
this third Day of December in the Year One Thousand seven Hundred
and fifty two by me The Penrose Rector.
This Marriage was Richard Eyles
Solemnized between Us the mark X of Hannah Snell
In the Presence of Elizabeth Sharp
Edward Cole

Figure 21: The marriage certificate of Hannah Snell and Richard Eyles (Stephens, 48)

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